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ABSTRACT

As a result of the concern for knowledge about the problems students face in achieving their educational goals, a study was conducted to answer two questions: "To what degree is articulation working in Tennessee?" and "What do our constituents say should be done to establish the process for effecting articulation?" Opinions regarding vocational education articulation were solicited in various surveys: general (secondary and postsecondary school personnel), institutional (secondary school principals and postsecondary administrators), student (postsecondary and Comprehensive Employment and Training Act [CETA] student employees), and vocational program (CETA personnel). The data gathered led to several conclusions: (1) students in postsecondary vocational education programs felt they had received effective guidance, while these same students felt they had not received effective guidance while in high school; (2) there is a lack of formal articulation between institutions; (3) standardized course and program objectives have not been widely used; (4) students were awarded credit for competency, previous course work, work experience, and military experience on a very limited basis; (5) there should be more involvement of employers in curriculum planning and development; and (6) the state department of education should assume a larger responsibility in effecting articulation. (Survey instruments, correspondance, data presentation, and a bibliography are appended.) (LRA)

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TENNESSEE VOCATIONAL EDUCATION ARTICULATION PROJECT:

FINAL REPORT

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Memphis State University
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August 1978

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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CHAPTER I

INTRODUCTION

The Tennessee Vocational Education Articulation Project resulted from the concern of the Division of Vocational Education of the Tennessee State Department of Education for knowledge about the problems students face in achieving their educational goals. In deciding that such a project should be undertaken, personnel in the division were in the forefront of recognizing a national concern of other professionals about barriers and aids to the articulation process and the absence of effective policies that had led to fragmented efforts in dealing with preparation for career development. The institutionalization of curriculum and methodology had been accompanied by segmentation and compartmentalization, thus preventing a dynamism necessary for adapting societal and technological changes. The rapid development of the postsecondary system of vocational-technical schools, community colleges, and state technical institutes necessitated an investigation of the relationships of those institutions to secondary schools.

Also, the opinions of clients and professionals should be assessed periodically to ascertain if the democratic process was providing equal access to educational opportunity in all state-supported programs and to see if both participants and professionals wanted a greater involvement of state support in funding and administering programs. Two questions needed to be answered: "To what degree is articulation working in Tennessee?" and "What do our constituents say should be done to establish the process for effecting articulation?"

For the purposes of this project, articulation means "the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process." To ascertain whether this definition is operational, a sample of a large population was asked to respond to questions and statements about the articulation process, make suggestions about changes in the process, and record their personal experiences relating to the process.

The effectiveness of the project was lessened by the magnitude of the task and an inadequate time span. The project expanded from the creation of one instrument to six, all involving field-testing, administration, and data analysis. What was foreseen was an adequate period in which to complete the project, but time per task was not adequate, and exact arrival times at milestones were not achieved because of delays over which staff members had no control, turn-around-time on instruments being one example.

Members of the faculty of Memphis State University, who represented four colleges of the university, and one member of the faculty of The University of Tennessee, Martin, served as members of the project staff and represented specific vocational areas. They were involved in several tasks, including: (1) identifying population groups, (2) developing questionnaires, (3) analyzing data, (4) synthesizing data, and (5) writing conclusions and recommendations. Graduate students in the Colleges of Education and Business Administration, in addition to performing all of the above tasks, reviewed literature, selected samples, distributed questionnaires, processed data, and met with representatives of the Division of Vocational Education of the Department of Education for consultation about project matters.

The remainder of the report consists of Chapter II, "Review of Literature," about program articulation; Chapter III, "Procedures," which includes information about instrument construction, populations involved in the study, sampling techniques, response to instruments, and data analysis; and Chapter IV, "Findings," which is a record of responses to questions and statements in the six survey instruments. Chapter V is labeled "Conclusions and Recommendations" and contains inferences about the findings and statements that can lead to further action on the part of educators to deal with the problems of articulation. The appendices include a copy of each instrument created for this survey, correspondence to people essential to the collection of the data, and data not included in tables in the "Findings" section of the report. The Bibliography concludes the study.

CHAPTER II

REVIEW OF LITERATURE

The history of education in America has been one of rapid growth and expansion. From the inception of the American educational system there has been concern for the articulation of educational programs among different institutions and levels of education. The problem of articulation arose as a consequence of a national commitment to universal education and a simultaneous national objection to centralized organization and administration of that education (Stone, 1969). E. B. Moore states that:

> Traditionally the challenge for more and better education had been met through the creation of systems of educational institutions designed to meet certain levels of educational need and specialization. The complexity of institutional stratification resulting from this national development could become self defeating if strenuous efforts at articulation were not implemented (Moore, 1972: 2).

Thus, the distortion produced by the translation of ideals into practice has complicated the process of articulation. This problem may be traced to the very roots of our educational system:

> The record of education in western civilization had shown a consistent dichotomy between minimum practical education for the masses and a more extensive and classical education for a ruling aristocracy. ... Even with the coming of the Industrial Revolution and the accelerating demand for a better educated work class, the increasing need for specialized skill development took precedence over the need for a more democratic social consciousness. Thus the perpetuation of class status took on a new dimension with the separation of so-called vocational and academic studies in the schools. Many thinkers from Benjamin Franklin to John Dewey saw the weaknesses in the developing system and argued wisely for reform. But the force of tradition and evolving economic pressures resulted in the present multiplicity of institutional types as opposed to a hierarchy of comprehensive institutions (Moore, 1973: 4).

Thus, under the guise of universal education, the American system of education provided simply another breeding ground for class differentiation. Two separate but very unequal forms of education grew up side by side. Nor was there simply a status distinction between the two modes of education; the traditional academic program was dominant. Most articulation efforts were directed toward bringing secondary programs into line with college admission standards. Therefore, any "legitimate" form of secondary education was college preparatory.

The persistence of this misconception constitutes one of the most serious cultural lags in America today. James C. Stone (1969) has noted that the establishment of comprehensive high schools and the expansion of secondary education to include vocational education has brought under question the validity of squeezing all forms of education into the collegiate mold. Louis W. Bender has stated:

> High school college preparatory and general academic programs continue to be out of line with the number of students who will follow the pattern thus laid. Many fall along the way into a valley of ambiguity which places them in the real world, ill-prepared and ill-equipped to find appropriate employment or to assume an appropriate citizenship role (Bender, 1973: 7).

The views of the majority of the authors cited in this review are in accordance with Bender's insistence that the collegiate mold be abandoned in favor of a more realistic model.

The compartmentalization of education and our national resistance to centralized power has resulted in the multiplicity of institutional types that Moore mentions. Especially divergent has been the growth of vocational education programs. On one hand, this is encouraging because it indicates a healthy responsiveness to the needs of society, but, on the other hand, the growth of vocational education has been too rapid and too diverse to permit proper coordination among institutions and levels of education. Lowell A. Burkett objects to what he views as a plethora of vocational educational institutions. He states that, at the introduction of vocational education at the beginning of the century, it was considered an educational program cutting across different levels of education. However, "it has become institutionalized in too many cases in recent years, thus segmenting, compartmentalizing, and fragmenting the program. Institutionalization has been the nemesis preventing the development of a total program of vocational education" (Burkett, 1974: 55).

Angelo C. Gilli, Sr. (1973), editor of the Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education, cites the growth pattern of vocational education as a contributing factor to the lack of articulation from secondary to postsecondary schools or from one postsecondary institution to another. Conflict and duplication are inevitable when new vocational programs arise and form their own specific objectives. Opachinch and Linksz voice a similar concern for the

> multiplicity of institutional types with differing missions. The goals and objectives of these institutions and their specific programs have not been adequately specified or understood. The operations of these differing units often reflect unclear and overlapping objectives, petty distinctions, and a surprising lack of concern for the student as opposed to the system (Opachinch and Linksz, 1974: 7).

At the center of the articulation controversy has been the emergence of the two-year colleges. The commitment of junior colleges to universal education and the open door policy of the community colleges has placed upon these institutions a large portion of the responsibility for vocational education. Unfortunately, the two-year institution has been impeded in the fulfillment of this responsibility because of an "institutional identity crisis." The initial interpretation of the two-year colleges as an extension of the high schools has become unacceptable because the two-year colleges have grown and sought higher status.

Grable describes the difficulty of the two-year college in its search for identity:

> Rejected in many of its attempts to identify with the university and unwilling to assume the role of a "glorified high school," the junior college thus found itself relegated to a sort of educational "no-man's land." Recognized as neither secondary nor higher education, it was forced to begin a search for institutional identity (Grable, 1971: 196).

He says that, because of a desire for a stronger affiliation with senior colleges, the two-year colleges have aimed most articulation efforts toward the senior colleges and universities. The resultant trend has been toward identification with higher education, an alignment which merely strengthens an already persistent collegiate mode. This is particularly ironic in light of the fact that the two-year insitutions were designed in an effort to serve those citizens whose educational needs could not be met in a senior institution.

Eugene Malone (1976) cites the two-year college's desire for acknowledgement as a form of higher education as a factor in the development of the dual track curriculum: the transfer curriculum and the terminal technical curriculum, which lacks transfer acceptability. According to Malone, this system sets up its own barriers. Gleazer states that the community college's affliliation with higher education is a cause for the unrealistic imbalance of the two tracks. He states that, although only one in three community college students actually transfers to a senior college, the university parallel track is dominant over the technical track (Gleazer, 1973: 46). Thus, the emphasis placed on college preparatory programs in the two-year institution is not in line with the reality of the needs of the student.

Not only do the students seeking technical training suffer from the two-year college's insistence on conformity to university standards, but also high school students have been overlooked in the rush for status. Grable labels as unfortunate the fact that the two-year college has "put forth such efforts in order to identify with high education, for in doing so it has turned its back upon secondary schools" (Grable, 1971: 197). A review of the literature of the past two decades reveals several studies dealing with articulation from two-year to four-year colleges: Wattenbarger (1966), Knoell and Medsker (1965), Kintzer (1973), and Medford and Wattenbarger (1974). Several of these studies reflect the findings of the State Board of Education of Florida, which state that "the generally fine academic record of community/junior college transfer students at the . . . senior institutions studied indicates high compatibility between the transfer programs and the senior institutions" (Florida State Board of Education, 1973: 63). Kintzer's studies reveal that approximately half the states have adopted guidelines to aid students in the transition from the two-year to the four-year institutions (Kintzer, 1973: 107). A Connecticut study on articulation between two-year and four-year colleges emphasizes a competency based approach in three principles: (1) continuity of educational experiences when transfers are necessary, (2) equitable assignment of transfer credit, and (3) productive and efficient use of student time and institutional resources (Medford and Wattenbarger, 1974: 28).

However, as Malone (1976) notes, until recently there has been a noticeable scarcity of literature dealing with secondary-postsecondary articulation. Kintzer charges that two-year colleges have been negligent in their responsibility to high school students in this emphasis on preparation for senior colleges. He states that "the importance of communication with high schools is slighted or completely overlooked and remains generally unreported" (Kintzer, 1973: 17). Kintzer echoes his concern later that more attention should be given to articulation between high schools and community colleges (Kintzer, 1976).

John Lombardi raises an interesting argument. He recalls the long struggle of the two-year college in gaining recognition as an institution of higher education and in obtaining the acceptance of course work for transfer. Unfortunately, he states, the two-year college has failed to show high schools the same consideration they themselves demanded for so long:

> In light of this struggle, I am at a loss to understand the two-year college's reluctance to recognize the legitimate requests for similar treatment toward acceptance of high school courses for transfer. The problem of the flow of students from one segment to another is not too much different. Unfortunately, those in the two-year colleges use the same arguments for not accepting work done in the high schools as the upper division colleges used when two-year colleges themselves requested such acceptance (Lombardi, 1975: 48).

The studies of the past decade reveal the unfortunate but hardly unexpected fact of poor articulation between secondary and postsecondary institutions offering vocational education. A study conducted by the National Advisory Council on Vocational Education (Tangman et al., 1976) indicates a nationwide lack of planned articulation. The study consisted of a survey mailed to fifty-six state advisory councils on vocational education. The survey findings indicate that there is planned articulation between the secondary and postsecondary levels of vocational education in less than 40 percent of the forty-eight states responding. The fact that postsecondary programs in a majority of the states that award advanced placement and credit do so on the basis of criteria other than certification from a secondary vocational program demonstrates a lack of confidence in the articulation procedures in existence. Generally, there is an absence of state policies concerning articulation arrangements. Instead, these processes are determined by the various postsecondary institutions, and, thus, conflict and duplication arise.

Another study, reported by Louis W. Bender, indicates a nationwide absence of effective articulation policies. This 1973 study conducted by the State and Regional Higher Education Center of Florida State University surveyed key state officials responsible for secondary and postsecondary occupational programs. The results indicate that written articulations agreements are not widespread at the state or institutional levels. The majority of the states reported unnecessary duplication and problems in transferability. Bender concludes that:

> separatism still exists with the nature and degree of difficulty in articulation related to organizational structures and working relationships. . . . Where structures of secondary and postsecondary occupational education . . . foster separate jurisdictions special efforts must be made to form lines of communication and inter-working relationships if articulation is to be successful (Bender, 1974: 23).

The problem is no longer simply a matter of lack of coordination through inactivity or apathy; it has become, in the estimation of some, a problem of active competition and antipathy. In an address to the Sun Mountain Conference, John Lombardi refers to the "scramble for students" caused by the current enrollment decline (Lombardi, 1975). As a result of this "scramble," various institutions have tried to become all things to all students. The title of John Grable's article "High Schools and Junior Colleges - Allies or Adversaries?" suggests the alarming state of affairs (Grable, 1971). Bender reports that in three states a higher echelon authority has been imposed on the state agency to force coordination between educational institutions "because of earlier adversary relationships" (Bender, 1974: 23). Indeed, such intervention has become a necessary reality nationwide. The Education Amendments of 1972 provide for the establishment of the 1202 Commission, which will have the authority to develop state vocational education plans. The underlying purpose of the commission, however, is to reduce "institutional autonomy" (Malone, 1976: 50). Thus, because of the rapid, independent, and often competitive nature of educational growth, the American educational system must yield to federal intervention to force the cooperation necessary for the efficient and economical training of the work force.

Much has been written concerning the roots of the problem of articulation. Two factors recur throughout the literature: the multiplicity of institutional types and programs and an alarming lack of concern for the needs of the student. Although, as Romine (1961) notes, the learner is the only common element among all educational insitutions, his needs are often secondary to other considerations. Allene Cross states that "evidence indicates that the needs of people are not at the top of the list of educational priorities. Too often the subject matter or institutional interests supersede the individual's needs" (Cross, 1973: 32). Bender charges that institutions are "unwilling to establish the communication necessary to achieve a unified, comprehensive educational system serving each student constituent as an individual, rather than placing primary concern and effort upon perpetuating educational jurisdictions" (Bender, 1973: 1). Bender continues to say that "it would appear that the self interest and mutual distrust among the leadership at times takes precedence over the needs of students" (Bender, 1973: 11). Obviously, the problem of articulation is a deep-seated, attitudinal one, and it manifests itself in a variety of ways.

The results of poor articulation reflect the gravity of the problem. Again, Bender is vocal concerning the issue:

> The tragedy of unemployment, underemployment, and unhappy employment can, to a great extent, be blamed upon the misalignment of the educational system and its lack of articulation with business, industry, government, and other employers of the real world (Bender, 1973: 12).

The Michigan State Department of Education states that the failure to coordinate vocational educational programs results in schools that "waste time and money and often fail to challenge young people" (Michigan State Department of Education, 1975: 7). Thus, the recognition that poor articulation wastes both human and educational resources has been the basis for the concern over articulation problems.

A number of factors arising within the last few years have made the need for effective articulation in vocational education even more imperative. Fifty percent of the college students who enter baccalaureate programs do not graduate and thus become candidates for specialized occupational training (Arnold Associates, 1972: 3). M. G. Linson (1971) and George Ikeda (1974) both state that 80 percent of the positions on the job market require something less than a four-year degree. Much of the responsibility for the education of this large portion of America's work force must fall to vocational education. L. C. Buffer et al. (1976) state that the average worker changes jobs five or six times in his lifetime, and these changes are likely to necessitate retraining. They also state that the highly mobile nature of our society demands the coordination of vocational education programs for the efficient training and placement of those seeking new employment. These factors have given rise to an increased awareness of the essential nature of effective articulation in serving society as well as individuals. A final reason for improving articulation is given by the Michigan State Department of Education in terms which are meaningful to everyone: ". . . the increasing cost of education to students, parents, and taxpayers makes improvement of articulation practices a necessity" (Michigan State Department of Education, 1975: 3).

It has been mentioned that poor articulation practices result from two basic causes: the diversity and autonomy of institutional types and a lack of concern for the needs of the student. The results of the 1976 National

Advisory Council on Vocational Education study on vocational education articulation support this proposition. In response to a question concerning factors that prevent effective articulation, the forty-eight responding states chose the following two factors most frequently: (1) separate control of secondary and postsecondary institutions and (2) a lack of commitment between secondary and postsecondary levels to improve articulation (Tangman et al., 1976). A review of the literature reveals various manifestation of these basic problems.

In Student Articulation Between Secondary and Post-Secondary Education: A Suggested Guide, B. R. McKinnerney (1974) lists numerous obstacles to effective articulation. The following is a list of his objections to prevailing practices in many postsecondary institutions: (1) varying entrance requirements of different programs, (2) admission based on arbitrary prerequisites rather than competency, (3) variations in completion requirements, (4) biased admission tests, (5) denial of credit for work/military experience, (6) lack of developmental programs for students with educational deficiencies, (7) lack of concern for adults as students, (8) absence of effective counseling, (9) lack of special needs programs for the handicapped and the disadvantaged, and (10) lack of cooperation in sharing resources and developing curriculum. A more recent study conducted by a joint committee of the American Association of Community and Junior Colleges and the American Vocational Association includes the following barriers to articulation: (1) confusion between federal and state agencies, (2) inter-institutional hostility due to decreasing enrollments and increasing costs, (3) duplication of course requirements due to failure of curriculum planners to communicate, and (4) insistence that vocational teachers be certified in the usual manner (Bushnell, 1977).

A review of recent literature reveals an increasing emphasis on solutions to the problem rather than the problem itself. Bender (1974) reports a study of state vocational education personnel which indicates that approximately two thirds of the states have held conferences or consortia concerning the articulation of secondary and postsecondary occupational education. The leader in this area has been the state of Pennsylvania which has held articulation conferences annually since 1969. Under the leadership of Angelo C. Gilli, Sr. of Pennsylvania State University, the conferences have yielded important literature concerning the articulation of secondary and postsecondary vocational education (Gillie, 1973; Gillie, 1974; Gilli, 1976).

Other conferences have been the New River Articulation Conference in Virginia (Cooper et al., 1973), the Sun Mountain Conference in Washington (Heuchert and Postlewaite, 1975), and a series of articulation workshops sponsored by the Washington Council of Local Administrators (Suver et al., 1976).

Several suggestions for the improvement of articulation processes recur throughout the proceedings of these conferences and other literature. The National Advisory Council on Vocational Education reports that the following factors have been helpful in encouraging effective articulation:

> resolution of governance and institutional role definitions; state level activities including staff development workshops, issue forums, and other agency involvement; local level activities including cooperative development of sequential curriculum and competency examinations; shared advisory committees, facilities and staff; individual instruction, and other supporting activities; philosophies of commitment and cooperation (Tangman et al., 1976: 34). The Joint Study team of the American Association of Community and Junior Colleges and the American Vocational Association states that the following practices were chosen as criteria for the selection of exemplary articulation programs in their 1977 study: (1) the existence of articulation agreements between two or more local institutions offering vocational education, (2) the use of criterion referenced tests or other systematic assessment procedures for the awarding of credit, (3) willingness to accept the transfer of credits from other institutions, (4) the use of follow-up studies, (5) the existence of

joint planning committees and advisory committees, (6) flexibility of curriculum to allow students easy accessibility to programs, (7) joint sponsorship of surveys assessing community needs, (8) provision of release time to staff members for joint planning sessions, (9) joint counseling and job placement services, and (10) joint budget and planning procedures to admit review by administrators from other programs (Bushnell, 1977).

Wayne Sampson (1971) emphasizes the need for information and communication at all levels. Students need occupational information early in their school years so that their career decisions will have solid bases. Guidance personnel, administrators, and instructors need current information about the job market and training opportunities available so that counseling and curriculum development may be relevant to the needs of society and the students. The staff of each program and institution involved in vocational education needs to be aware of opportunities and training available elsewhere. Finally, if effective articulation is to become a reality, institutions must communicate to one another about their needs, requirements, and problems. Without such communication any articulation effort is doomed to failure.

The establishment of coordinating councils between levels of vocational education has received attention as a possible means of effecting articulation. At an Ohio articulation workshop, the establishment of such councils was considered a high priority item by the majority of those in attendance (Malone, 1976). Galton and Wattenbarger present a list of guidelines for coordinating councils. The purposes of these councils are to examine the various roles and functions of vocational educational institutions and make recommendations to the respective boards responsible for the institutions. The councils should not have the authority to implement their decisions, but sufficient rapport with the respective boards should be maintained in order to assure that the councils' suggestions will receive appropriate consideration. Thus, by gaining influence over various institutions and levels of vocational education, the councils can counteract the detrimental effects of compartmentalized education carried out by too many autonomous institutions. The awareness among vocational education personnel that there is one agency concerned with vocational training will encourage increased efforts at communication and articulation among institutions and educational levels (Galton and Wattenbarger, 1976: 42-44).

Centering on articulation between the secondary and the postsecondary levels of vocational education, the Oregon State Department of Education (1968) suggests the use of the cluster approach. The high school programs should provide skills and knowledge that are common to several occupations in one cluster and requisite for entry into a particular occupational "family." This general education in an occupational cluster should aid the student in making an appropriate career choice (Oregon State Board of Education, 1969). The postsecondary institutions, working from the common base provided by secondary schools, can concentrate on providing more specialized training.

Malone (1976) states that the ascent through career clusters to the highest level of compentency has been impeded by the notion that vocational education programs are terminal and that a more realistic view is called for. Harold A. Schrupp proposes the career ladder approach to abolish the distinction between the terminal and the transfer concepts of vocational education. The career ladder represents an integration of the two in that the educational program should be arranged in such a way to allow the student to secure employment and/or continue the educational process at any point. Schrupp explains that the purpose of the career ladder approach

> has been to design a curriculum to provide a student with skills which would enable him to seek employment at any time in an entry level position in his interest area. Should he re-enter school . . . he can gain new skills to allow him to qualify for a higher position. Eventually, should he decide to, he can enter a four-

> year institution, to major in his field of competency and gain a higher degree (Schrupp, 1971a: 12).

Participants at the Sun Mountain Conference also favored the career ladder approach with competencies specified at each step of the ladder (Suver et al., 1976).

Perhaps the most attention has been given to the competency approach to articulation. Bender's account of the survey by the State and Regional Higher Education Center of Florida State University reveals that, in most cases, key state officials responsible for vocational education favor competency based or skill measurement criteria as the basis for awarding credit. Although the following quotation refers to requirements for entry into a job, it is also true of requirements for entry into a postsecondary institution from a secondary school:

> The requirements, at the present time, for job entry into a vocation are time oriented and do not relate to the competency of the individual seeking the position. The clock-hour approach in vocational education is out-of-date (Louisiana State Board of Education, 1976: 11).

This realization has increased awareness of the need for a competency approach in vocational education. Support for this approach may be found in much of the literature (Smith, E., 1972; Cross, 1973; McKinnerney, 1974; Heuchert and Postlewaite, 1975). The awarding of credit for work and military experience has also received much support (Cross, 1973; McKinnerney, 1974; Enderlein, 1976).

Angelo Gilli, Sr., proposes a rather unconventional plan for improving a student's progress in vocational education and the world of work. He suggests thorough counseling, testing, and the diagnosis of aptitudes as an integral and primary function of the institution offering vocational education. This information will enable the student to make an enlightened and realistic choice of a career. Job placement should be a regular service provided to the student, and guidance and personnel staff should arrange interviews for the student at the time of his decision. Interviews should be held, Gilli insists, before the student receives any training in the field. When the student secures a position, he then begins his training. The employer indicates to the institution which skills are necessary and whether these skills may best be obtained through formal schooling or on the job training. In such a plan, the student would have a very clear perception of the objectives of his study (Gilli, 1976: 14-15).

The importance of more traditional practices such as follow-up studies and evaluations has been noted as a way of assessing the degree to which articulation exists and the need for its improvement. Edward C. Mann of the State Technical Institute at Memphis states:

> Follow-ups are not, and should not be, undertaken merely to compile records. Their ultimate objective is to gain information that will enable the institution to do a better job in serving the educational needs of the students (Mann, 1976: 78).

This type of evaluation is summative; that is, it looks only at the success of the graduate. The implementation of formative evaluation procedures, those which monitor and direct process, also holds great promise for the improvement of articulation. Maxine A. Enderlein notes the advantages of using evaluation during the planning and development of a vocational program:

> Evaluative research has indicated the criteria which must be considered when evaluating the performance of an existing instructional program. The criteria, however, possess additional value. Attention to evaluative criteria during the program planning or development phase may serve as a guide to improve the effort, effectiveness, and efficiency of vocational and technical programs (Enderlein, 1976: 38).

Thus, the design and utilization of evaluation strategies aimed at the improvement of articulation provide a viable avenue of action for educators.

Various other arrangements and agreements between secondary and postsecondary institutions have been suggested to improve articulation. The following is a list of those occurring most frequently:

1. Awarding advanced placement and/or credit for secondary vocational training and work experience (Malone, 1976; Kintzer, 1976)
2. Joint development of curriculum (Grable, 1971; Moore et al., 1973)
3. Development of course/program objectives and competencies (Tangman et al., 1976)
4. Joint development of competency examinations (Tangman et al., 1976)
5. Building courses according to job specifications to enhance congruence with needs of the world of work (Suver et al., 1976; Schrupp, 1971a; Moore et al., 1976)
6. Greater use of programmed learning (Cross, 1973; Tangman et al., 1976)
7. Joint attendance at secondary and postsecondary institutions (Manley, 1970; Cross in Gillie, 1973)
8. Contracting with external institutions and agencies which can best provide specialized training (Pratt, 1973; Linson et al., 1971)
9. Joint usage of faculty and facilities (Malone, 1976; Tangman et al., 1976)
10. Joint inservice and faculty development programs (Grable, 1971; Heuchert and Postlewaite, 1975)
11. Development of professional organizations whose membership would include personnel at all levels of a particular vocational field Grable, 1971)
12. Released time for teachers to attend articulation workshops and related functions (Cooper and McCarty, 1973)
13. Sharing advisory committees to encourage coordinated programs (Linson et al., 1971; Grable, 1971; Heuchert and Postlewaite, 1975)
14. Financial incentives for articulation efforts (Heuchert and Postlewaite, 1975)

While it is useful to note suggestions such as the ones mentioned above, it is even more useful to see how some of those suggestions have been translated into practice. The following is a brief account of the most notable articulation projects and agreements.

Miami-Dade Junior College, Florida. Alfred Smith presents a thorough description of this outstanding project. Studies indicated that a large number of students who were going to college had no idea of what careers to pursue. This suggested the need for extending college counseling services to the high schools. Eight high schools were selected as satellite counseling centers and staffed with high school counselors who were paid to work evenings and weekends to accommodate all citizens of the community. Two Miami-Dade students were chosen to augment the staff of each counseling center in order to provide peer counseling. The homerooms of each satellite school were canvassed to inform students of the new services available, and students were invited to visit the college campus. In addition, Miami-Dade faculty members visited the high schools to talk with the students. This program exhibits the close cooperation and communication necessary for improved articulation (Smith, A., 1970).

Project Success, North Carolina. The State Board of Education commissioned personnel from the State Department of Community Colleges, the State Department of Public instruction, and the Occupational Research Unit to provide leadership for the coordination and articulation of programs at all levels. The recommendations of Project Success included consistent evaluation of student achievement throughout all high schools and in terms of proficiency and admission to college programs at that level of proficiency (Manley, 1970).

Oakland Community College, Maryland. The staff at Oakland Community College encouraged incoming students who had completed training in specialized skills to take a proficiency examination. Advanced credit was awarded to students who displayed adequate proficiency (Hill and Nunnery, 1971).

ROP/ROC, California. The Veysey Act (1963) made it possible for high school students to attend junior colleges and receive credit at either the secondary or the postsecondary level. The Regional Occupational Program/ Regional Occupational Center (ROP/ROC) was established to provide county-wide systems of vocational education where districts could not provide adequate training. The career ladder and "packaged" learning were central concepts to this approach. Cerritos, Citrus, and North Orange County colleges developed extensive plans to make vocational training available to high school students. Special class arrangements, counseling, registration within the high school, and transportation for students were included in these plans (Schrupp, 1971b).

Board of Cooperative Educational Services, Nassau City, New York. The Board of Cooperative Education Services sponsored a workshop for cooperative curriculum development between secondary and postsecondary levels of vocational education. Designed primarily for minority students, the program included six-week summer sessions at postsecondary institutions for high school students to aid in their matriculation as full-time college students (Modderno, 1971).

Corning Community College, New York. Advanced placement programs for several secondary vocational courses were developed jointly by secondary and postsecondary vocational teachers. Freshmen entering Corning Community College were given an opportunity to take proficiency examinations in several areas. After the exam, the student and a counselor reviewed the results, and the student was allowed to help make the decision concerning the awarding of credit. This program not only recognized proficiency as a basis for credit, but also the worth of a student's self-evaluation (Smith, E., 1972).

Institute for Advanced Study in Vocational-Technical Education, Hawaii. This institute sponsored by Hawaii University was designed to give vocational personnel at the secondary and postsecondary levels an opportunity to meet, discuss problems, and formulate solutions to these problems. One accomplishment of the institute was the preparation of written articulation agreements between the community college and the State Department of Education (Zane, 1973).

California's Richmond Plan. The purpose of this plan was to implement an integrated approach to vocational subject matter and to increase the public's awareness of further educational opportunities at community colleges (Opachinch and Linksz, 1974).

Northhampton County Area Community College, Pennsylvania. A program called the Career Education Cooperative allowed each high school senior to enroll in the community college at the end of his senior year and earn an associate degree by the end of his thirteenth year. Such arrangements facilitate the transition from secondary to postsecondary programs (Gleazer, 1974).

Operation Bridgeheads, City University of New York. Operation Bridgeheads established one of the few "officially constituted agencies whose sole responsibility is articulation between high schools and community colleges" (Opachinch and Linksz, 1974).

James Sprunt Institute, North Carolina. Proficiency examinations were developed for vocational courses common to the community college and secondary school. Competency based objectives were established for the areas of vocational education (Woelfer, 1975).

Minnesota State Department of Education. A project directed by the Minnesota Research Coordinating Unit for Vocational Education developed a task-based system consisting of task inventories and competency records. Formative evaluation was built into the system to ensure proper direction. One result was a set of guidelines for competency-based programs (Minnesota Research Coordinating Unit for Vocational Education, 1975).

Wisconsin - Final Report. This study focused on articulation of vocational education curriculum between secondary and postsecondary levels. A schematic model was generated to avoid duplication of course content, texts, reference materials, equipment, instructional processes, and workshop conditions (Mandy and Stapleton, 1975).

Cuyahoga Community College, Cleveland Ohio. Staff from the Eastern Campus of Cuyahoga Community College and its feeder schools joined in a workshop to achieve the following objectives: (1) to identify problems in articulation and achieve consensus on priority goals, (2) to demonstrate utilization of sources from within rather than without, (3) to gain official acceptance of a plan for improving articulation, and (4) to demonstrate the leading role of the community college. Objectives established by workshop participants received endorsement from administrators at both levels (Malone, 1976).

New York Area. A project involving thirteen secondary and postsecondary schools in the New York area investigated progress made in articulation projects. Five principal types of programs were found:

1) early admission
2) split day
3) college courses taught by college faculty [illegible] the high school
4) college courses taught by high school faculty at the high school level
5) separate faculty and differentiated curricula in separated facilities (Leiberman, 1976).

Project I, Maryland. The State Board for Community Colleges in Maryland designed five projects to improve postsecondary occupational education. The purpose of Project I was to improve the articulation between secondary and postsecondary institutions. As a result of Project I, an articulation agreement between the Washington County Board of Education and Hagerstown Junior College was made. The agreement provided for the following: (1) meeting of faculty to determine where there was duplication and to develop guidelines for advanced placement and credit arrangements, (2) early release of secondary students to receive more specialized training at the junior college, (3) faculty sharing, and (4) financial and transportation aid for students (Maryland State Board for Community Colleges, 1976).

AACJC/AVA Joint Study. The Joint Study team, organized in December 1976 with the financial backing of the Office of Education, visited 22 sites selected as exemplary articulation programs to determine polices and practices encouraging articulation. From the 22 sites, nine were chosen for more intensive study. (Several of these are abstracted below.) These programs have succeeded due to leadership, local funding, economic climate, and clarity of purpose (Bushnell, 1977).

Bellevue Community College, Bellevue Washington. Planning sessions bringing together curriculum planners from high schools, vocational-technical institutes, and community college have been held regularly under the direction of Allen Suver of Bellevue Community College. The purposes of these meetings are to define enrollments, and course offerings and to develop materials. Thus, duplication of services and ignorance of other vocational programs have been avoided (Eddy, 1977).

Milwaukee Area Technical College. Several innovative strategies have been employed by MATC. MATC has contracted with local high schools to furnish teachers and facilities for public high school students who enroll in specialized classes for which they receive credit. Eleventh grade students who have satisfied high school graduation requirements have been permitted to enroll in diploma or associate degree training programs in an "Early Leaver" program. Also, high school students have been offered the opportunity to receive credit by examination in basic typing, shorthand, technical drafting, and commercial art (Nugent, 1977).

Williamsport Area Community College, Williamsport, Pennsylvania. Cooperative relationships among those involved in vocational education have resulted in successful articulation. Representatives from local high schools, postsecondary institutions, the business community, and the Bureau of Employment Security determine what vocational programs to offer. Newspaper and radio spot advertising inform the public about WACC programs. In 1975, a survey found that 74 percent of the students who completed programs at WACC were employed in the fields for which they had trained, 12 percent were employed in unrelated fields, 9 percent went on to higher education, and only 4 percent were unemployed (Fedderson and Loch, 1977).

Board of Cooperative Educational Services, Hamilton-Fulton and Montgomery Counties, and Fulton-Montgomery Community College, Jamestown, N.Y. Due to the influence of BOCES, high schools, vocational schools, and FMCC share library facilities, data processing programs, and business machine programs, the latter two allowing six semester hours of college credit. Also, BOCES offers 144 hours needed by apprentices in trade and technical areas, some of which can be transferred to FMCC toward completion of an associate degree (Smith, 1978).

Iowa Central Community Colleges. Students in the vocatonal technical division of Iowa Central are given the opportunity to receive credit by examination. Advisory groups from public schools and vocational technical occupations assist counselors in preparing student interest surveys to determine the needs of the community and the skills of the students. This information is used for making decisions regarding the need for new programs. Placement of the students is maintained at 98 percent (Barbour, 1978).

Most of these projects have two things in common: (1) motivation springing from a desire to make education efficient and maximally beneficial for the student and (2) involvement of vocational staff who ultimately must translate the concept of articulation into practice. These two factors have long been recognized as the key to effective articulation. Arden Pratt's statement that "articulation is the recognition of the student as the focal point of learning" expresses the philosophy of commitment necessary to bring about improved cooperation among vocational education units (Pratt, 1973: 54). However, the commitment of high-level officials is not sufficient for the job. A report by the Michigan State Department of Education states that a formal articulation design

> will have little or no chance of success without commitment of educational leaders at the local level. A system which attempts to develop program articulation and which is planned by someone external to the institutions or agencies involved certainly will be ineffective. Institutional roles can best be determined locally by those involved in the day to day operations (Michigan State Department of Education, 1975: 6).

Suver et al. echo this conviction: "those practitioners most directly involved with programs . . . should assume the major roles in developing and implementing articulation strategies" (Suver et al., 1976: 9).

It is the realization of the necessity for a "grass roots" approach to articulation that caused the Tennessee State Department of Education to commission a study of vocational articulation in Tennessee by means of surveying various populations involved in vocational education. Such information gathered from the people who are involved in vocational education daily at different levels and institutions should present a clear assessment of existing practices and future needs.

CHAPTER III

PROCEDURES

This chapter contains four sections that relate to procedures essential to the project: (1) instrument construction, (2) a description of the populations involved in the study, (3) a statement about the techniques used in sampling the populations and the numbers sampled and a record of the response to the instruments sent to participants, and (4) data analysis.

Instrument Construction

During the project, six instruments were constructed: General Survey, Institutional Survey: Secondary Schools, Institutional Survey: Postsecondary Schools, Postsecondary Student Survey, Survey of Vocational Programs, and Vocational Student Survey. A copy of each instrument is in Appendix A. A description of each follows.

General Survey

The purposes of the General Survey were to allow vocational personnel the opportunity to identify existing conditions that aid and inhibit the articulation process and to give suggestions for the improvement of the process. The survey was composed of one item (item 1) consisting of forty-three "factors" from which survey respondents selected four salient aiding factors and four salient inhibiting factors. The respondents were not asked to rank these factors. Similarly, item 4 consisted of twenty-three possible suggestions for improving articulation. Respondents were asked to choose five signficant suggestions; again, these were not ranked by respondents. Questions 2, 3, and 5 gave respondents the opportunity to list additional suggestions. Item 6 dealt with the effectiveness of local coordinating councils where they existed.

The primary task in the construction of this survey was the selection of factors for items 1 and 4. Several sources were used in the selection of factors for inclusion in the survey. A signficant source was a list of conditions which vocational personnel across the nation identified as factors affecting articulation in a survey by the National Advisory Council on Vocational Education (Tangman et al,. 1976). Other surveys concerning the articulation process also provided factors for items 1 and 4 (Moore et al., 1973; Bender, 1973a; Opachinch and Linksz, 1974; Malone, 1976). Several relevant factors were suggested in the literature reviewed during the initial phases of the project. Finally, additional pertinent items were added by respondents to the field test of the survey and by State Department of Education personnel.

Pilot testing of the General Survey took place in several stages. First, several graduate students in the Distributive Education Department at Memphis State University responded to an initial version which was somewhat briefer than the final survey. At this point, the primary matters of concern were clarity of instruction and length of time required to complete the survey. No problem was detected in these areas, so the survey was mailed to a random sample of vocational personnel (N=26) throughout the state along with a request for their recommendations for improving the survey. Several additional factors were suggested by these respondents. At a subsequent meeting with State Department of Education staff, these factors were approved for inclusion in the survey in addition to a few suggested by the staff members themselves. A few technical refinements were adopted, and the General Survey was completed.

Institutional Surveys

Originally, one institutional survey was constructed for use with both secondary and postsecondary institutions offering vocational education. The items on this initial survey were taken from similar items on the National Advisory Council on Vocational Education survey of secondary-postsecondary articulation. Pilot testing was conducted with the Memphis State University students mentioned previously and with a sample of institutions offering vocational education (N=8). After the pilot testing, it was determined that separate surveys for secondary and postsecondary institutions would eliminate possible confusion encountered with the use of "routing" questions.

Institutional Survey: Secondary Schools

Questions 1 and 2 were taken from the NACVE survey. Questions 3-7 deal with counseling available to students and with staff awareness of opportunities in vocational education. Item 8 asks respondents to indicate current activities in which their institution has participated. This list was selected from factors identified as encouraging articulation in previous surveys and in the literature.

Institutional Survey: Postsecondary Schools

Questions 1-3 were taken from the NACVE survey. Questions 4 and 5 dealing with the transfer curriculum and career ladder approach were added since much of the literature was devoted to these issues. Item 6 is analogous to item 8 of the survey for secondary schools, the activities having been suggested in the literature.

Postsecondary Student Survey

Most of the questions on this survey were drawn from an informal follow-up study of business students. Several questions were, of course, suggested by the literature. Review of the survey before its dissemination was conducted by Memphis State University faculty members on the committee for the project.

Survey of Vocational Programs

The questions on this survey resulted from a series of productive interviews with representatives of apprenticeship programs, CETA programs, and correctional education programs in Memphis. Among these were the following: Mr. Sherm Olsen and Ms. Dana Williams of CETA; Ms. Ada Shotwell, department chairman of Developmental Studies at Memphis Correctional Center; Mr. Earnest Davis of the Correctional Research and Evaluation Center; Mr. Herschel Smith, CETA director at the Shelby County Penal Farm; and Mr. William Ross of the Memphis AFL/CIO Labor Council. These representatives were able to provide valuable information to the project staff and suggested several pertinent questions for the survey. Most of these personnel also had an opportunity to review an initial version of the survey and to suggest improvements.

Vocational Student Survey

This survey resulted from an adaptation of the Postsecondary Student Survey to fit students from CETA programs, apprenticeship programs, and programs in correctional institutions.

Description of Populations

The primary task in establishing population groups for the study was to define each content area of vocational education so that adequate representation could be possible across characterizable units of the practitioners, the clientele, or the consumers of services and products of vocational education training. The primary source used in the completion of the above task was the Directory of Personnel 1978, Vocational-Technical Education, State Board for Vocational Education, provided by the Tennessee State Board for Vocational Education.

In addition, recommendations were sought from specialists in the content areas, from local advisory group personnel, from key personnel at both state and federal government levels, from directors of organizations involved, and from project staff experts.

The resultant populations were divided into three (3) major areas: Public, Private, and Atypical. The public area was defined as those members and/or institutions directly identified by the State Department of Education or its representatives as belonging to public secondary and/or public post-secondary sectors of vocational education. The private sector includes all those institutions listed by the State Department of Education as private secondary schools and those listed as proprietary postsecondary occupational training programs by the Tennessee Research Coordinating Unit for Vocational Education. Atypical groups are CETA agencies, correctional institutions, and active apprenticeship programs. Populations extend to both people and institutions within each definition.

Public Sector

The public sector was identified as consisting of 456 institutions, 384 of which were secondary schools and 72 of which were postsecondary institutions. The program directors of these institutions became the population from which a sample to receive the institutional survey was extracted. Within these institutions, subpopulations were developed separating personnel between secondary and postsecondary institutions and further dividing these subpopulations into classifications of administrator, counselor, and instructor.

In the case of the postsecondary schools, a distinct subpopulation was defined equal to the students of postsecondary schools. In addition, populations were identified among State Department of Education vocational education personnel and local chairpersons of vocational education districts.

Those institutions considered secondary in nature were selected to include those public high schools with vocational curricula and vocational centers specifically designated for vocational instruction at the secondary level. From the 384 secondary institutions thus identified, subpopulation groups were segregated consisting of 96 administrators, 559 counselors, and 3191 instructors, all employed in the vocational education programs of the schools or centers.

Furthermore, the secondary school instructors defined were subdivided by content area so that the populations could be controlled for sample bias in a content variable. Categories selected for those subgroups were: agriculture, distributive education, health occupations education, home economics, office occupations, technical education, trade/industrial occupations, and special programs other than the foregoing.

The postsecondary schools include area vocational training schools, community colleges and state technical institutions. Subpopulation paramenters included 164 administrators, 38 counselors, and 1694 instructors within the 72 institutions.

No attempt was made to control with population parameters or sampling procedures across state administrative districts. It was agreed that the study of articulation would evolve around the interrelation of programs and personnel, and, while regional differences surely exist, such differences are probably not readily equatable to the articulation process, but are probably representative of local uniqueness that would exist regardless of the state of the articulation process.

Subpopulations of public vocational education personnel were separately defined to include: 99 persons employed by the State Department of Education as vocational education personnel in both the capital and district offices, and 52 local chairpersons of district vocational efforts.

Finally, the research identified 31,755 students from the records of the 72 postsecondary schools. This population is representative of the end product of the vocational education process, and it was felt that its input was essential to the study.

Table 1 summarizes the numerical outcome of these population definitions in the public sector of the study. Tables 2 and 3 offer comparative statistics for the private and atypical sectors, respectively, and Table 4 is a composite of all three primary population parameters.

Private Sector

The theory underlying the identification of population parameters in the private sector is essentially identical to that applied to the description of populations in the public sector, with one exception: since none of the private secondary schools offered definable vocational education programs, administrators, counselors, and administrators of vocational education could not be identified.

In all, 146 private institutions were identified from two primary sources: (1) the Tennessee Commission on Postsecondary Vocational Education Institution Authorization, Directory of Commission-Approved Private Postsecondary Vocational Schools and their Representatives, April 1, 1977, and (2) the directory of the Tennessee Research Coordinating Unit for Vocational Education, June, 1974. Of the 146 schools, 29 were secondary high schools and 117 were postsecondary. (Actually, the two directories produced 136 identifiable postsecondary units, but 19 of them were either duplicated or attrited listings, leaving a set of 117. See the explanation of sample size relative to this subpopulation in the "Sampling and Response" section later in the study.)

Table 1

Summary of Populations: Public Sector

Population	N of Subpopulation	N of Population
SECONDARY SCHOOLS		
Institutions		384
Administrators:		
Local Dir. of Voc. Ed. Center		96
Counselors		559
Instructors:		
Agriculture	260	
Distributive Educ.	160	
Health Occupations	149	
Home Economics	467	
Trade/Industrial	1,211	
Office Occupations	296	
Technical Education	648	
Special Programs	*	
Total		3,191
POSTSECONDARY SCHOOLS		
Institutions		72
Administrators:		
Voc-Tech Superintendents	29	
Community Colleges	61	
State Technical Institutes	74	
Total		164
Counselors:		
Community Colleges	23	
State Technical Institutes	15	
Total		38
Instructors:		
Area Vocational Training Schools	955	
Community Colleges	429	
State Technical Institutes	310	
Total		1,694
Students		31,755
MISCELLANEOUS		
State Department Vocational Personnel	99	
Local Chairpersons	52	
Total		151
TOTAL OF PUBLIC SECTOR POPULATIONS		38,104

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*No population defined. Included as reporting place for non-defined programs.

Table 2

Summary of Populations:
Private Sector

Population	N of Population
SECONDARY SCHOOLS	
Institutions*	29
POSTSECONDARY SCHOOLS	
Institutions	117
Administrators	49
Counselors	13
Instructors	150
Students	2,258
TOTAL OF PRIVATE SECTOR POPULATIONS	2,616

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*Accredited high schools listed in 1977-78 Directory of Public Schools (Nashville: State Department of Education, 1977), pp. 145-48.

Table 3

Summary of Populations: Atypical Sector

Population	N of Subpopulation	N of Population
CETA		
Administrators	5	
Counselors	2	
Instructors	75	
Students	659	
TOTAL OF CETA POPULATIONS		741
CORRECTIONAL INSTITUTIONS		
Administrators	7	
Counselors	5	
Instructors	48	
Students	519	
TOTAL OF CORRECTIONAL POPULATIONS		579
APPRECTICESHIP PROGRAMS*		
Administrators	349	
Instructors	470	
Students	6,570	
TOTAL OF APPRENTICESHIP POPULATIONS		7,389
TOTAL ATYPICAL SECTOR POPULATIONS		8,709

*Apprenticeship programs do not have counselors.

TABLE 4

Summary of Populations: Composite

Population	N of Sector	N of Population
INSTITUTIONS		
Public Sector	456	
Private Sector	146	
Total		602
ADMINISTRATORS		
Public Sector	421*	
Private Sector	49	
Atypical Sector	361	
Total		831
COUNSELORS		
Public Sector	597	
Private Sector	13	
Atypical Sector	7	
Total		617
INSTRUCTORS		
Public Sector	4,885	
Private Sector	150	
Atypical Sector	593	
Total		5,628
STUDENTS		
Public Sector	31,755	
Private Sector	2,258	
Atypical Sector	7,748	
Total		41,761
	TOTAL OF POPULATIONS	49,429
RECAPITULATION BY SECTOR		
Public Sector		38,104
Private Sector		2,616
Atypical Sector		8,709
	TOTAL OF POPULATIONS	49,429

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*Includes State Department Vocational-Technical Education personnel and local chairpersons of advisory committees.

Postsecondary institutions described include privately supported colleges, universities and vocational training schools, as approved in the two sources quoted above. Subpopulations thereunder were identified as 49 administrators, 13 counselors and 150 instructors. The student population of these schools was assessed at 2258 students. Table 2 represents a summary of the parameters.

Atypical Sector

The common problem of defining populations for statistical purposes in the atypical sector of the study was the apparent lack of analogous personnel record keeping at most levels. The task was further complicated by a lack of uniformity of accounting nomenclature. For example, CETA programs were identified by accounting members in the student personnel office, but, in the field they were numbered with some sort of task/occupation code.

The area of apprecticeship did not lend itself to easy definition for another apparent reason. Centralized statistics were not readily available because their origination was through federal computer terminals at which programs had not been written to retrieve information such as the study required.

Another problem was that of seasonal attrition; e.g., between the accounting period last ended for CETA participants and the actual summer program load there occurred a reduction in enrollment from 1578 to 669 participants.

Correctional institutions were, as expected, more representative of static populations, but, even here, disciplinary problems and release possibilities tended to change the final population somewhat from its original definition.

Comprehensive Employment and Training Act (CETA) entities devolved into 82 contract areas or programs. Within these programs, the study identified 5 administrators, 2 counselors, and 75 instructors. (In some programs, the director was also the administrator and/or was also the instructor. Thus, in avoiding duplicate survey response, the study reflected somewhat less than one instructor per program.)

The CETA student population was obtained via director intervention, and was calculated to be 669 at the date of survey application. As indicated in an example used earlier in this section of the report, this number was down considerably from the last quarterly summary from the state commission payroll officer and probably reflects the normal attrition brought on by the summer season.

Seven (7) state correctional institutions were studied as to their vocational programs. Subpopulations identified were 7 administrators, 5 counselors, and 48 instructors. In addition, a student population of 519 was described. One institution, DeBerry Correctional Institute, had not yet launched an intended vocational program, but, since the program was to begin July 1, 1978, the education coordinator was included among the 7 administrators.

A population was also described for 349 apprenticeship program administrators, 470 instructors, and 6570 students. No counselor groups were found. Since the researchers did not have direct access to most records of apprenticeship programs or personnel, the study assumes the adequacy of the application of research samples to the population described by area directors of the apprenticeship realm.

Sampling and Response

Tables 5 through 8 contain both sampling and response summations in a sequence of public, private, atypical, and composite groupings. It was

Table 5

Sample and Response Summaries:
Public Sector

Description	N	Sample n	Response	Response As % of n
SECONDARY SCHOOLS				
Institutions	384	38	30	78.9
Administrators	125	59	29	49.2
Local Dir. of Voc. Ed. Center	96	30	20	66.7
Counselors	559	56	28	50.0
Instructors	3,191	405	115	28.4
POSTSECONDARY SCHOOLS				
Institutions	72	72	29	40.3
Administrators	164	90	36	40.0
Voc-Tech Superindents	29	29	9	31.0
Community Colleges	61	31	14	45.2
State Technical Institutes	74	30	13	43.3
Counselors	38	38	16	42.1
Community Colleges	23	23	6	26.1
State Technical Institutes	15	15	10	66.7
Instructors	1,694	168	109	64.9
Area Vocational Training Schools	945	95	33	34.7
Community Colleges	429	42	38	90.5
State Technical Institutes	310	31	28	90.3
Students	31,755	316	138	43.7
MISCELLANEOUS				
State Dept. Voc. Personnel	99	30	13	43.3
Local Chairpersons	52	30	11	36.7

Table 5 Continued

Description	N	Sample n	Response	Response As % of n
TOTAL SECONDARY SCHOOLS	4,259	558	202	55.8
TOTAL POSTSECONDARY SCHOOLS	33,665	626	319	51.0
TOTAL MISCELLANEOUS	151	60	24	40.0
TOTAL PUBLIC SECTOR	38,104	1,244	545	43.8

SECONDARY INSTRUCTORS BY CONTENT AREA	N	Sample n	Content Area Indications	% of Total Indications
Agriculture Instructors	260	52	17	7.6
Distributive Education Instructors	160	32	17	7.6
Health Occupations Instructors	149	30	26	11.5
Home Economics Instructors	467	47	19	8.5
Trade/Industrial Instructors	1,211	121	52	23.2
Office Occupations Instructors	296	58	38	17.0
Technical Education Instructors	648	65	47	21.0
Special Programs Instructors	-	-	8	3.6
TOTAL	3,191	405	224	100.0

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*Response figures by content area are not included in the TOTAL categories inasmuch as the respondents involved are already accounted for in their primary categories. They are presented here to depict the balance among content areas response weighted by indicated multiple responsibilities of the respondents.

Table 6

Sample and Response Summaries: Private Sector

Descriptor	N	Sample n	Response	Response As % of n
SECONDARY SCHOOLS				
Institutions	29	29	14	48.3
POSTSECONDARY SCHOOLS				
Institutions	117	20	12	60.0
Administrators	49	25	6	24.0
Counselors	13	13	10	76.9
Instructors	150	30	1	3.3
Students	2,258	30	13	43.3
TOTAL SECONDARY SCHOOLS	29	29	14	48.3
TOTAL POSTSECONDARY SCHOOLS	2,587	118	42	35.6
TOTAL PRIVATE SECTOR	2,616	147	56	38.1

*See explanation in "Sampling and Response" section of the text.

Table 7

Sample and Response Summaries:
Atypical Sector

Program	N	Sample n	Response	Response As % of n
CETA PROGRAMS				
Administrators	5	5	7*	140.0
Counselors	2	2	1	50.0
Instructors	75	23	17	73.9
Total Personnel	82	30	25	83.3
Students	669	67	44	65.7
CORRECTIONAL INSTITUTIONS				
Administrators	7	7	5	71.4
Counselors	5	5	1	20.0
Instructors	48	18	18	100.0
Total Personnel	60	30	24	80.0
Students	519	55	54	98.2
APPRENTICESHIP PROGRAMS				
Administrators	**	19	11	57.9
Counselors	**	1	1	100.0
Instructors	**	18	5	27.9
Total Personnel	349	38	17	44.7
Students	6,570	66	11	16.6
TOTAL CETA PROGRAMS	751	97	69	60.8
TOTAL CORRECTIONAL INSTITUTIONS	579	85	78	91.8
TOTAL APPRENTICESHIP PROGRAMS	6,919	104	28	26.9
TOTAL ATYPICAL SECTOR	7,255	286	175	61.2

*Seven (7) respondents identified themselves as administrators when only 5 were sampled.

**In a substantial number of programs the director is also the instructor. Therefore, the study samples the 38 total programs as if one-half were represented by administrators and one-half were represented by instructors. Only one counselor was found.

Table 8

Sample and Response Summaries: Composite

Description	N	Sample n	Response	Response As % of n
INSTITUTIONS				
Public Sector	456	110	59	53.6
Private Sector	146	49	26	53.1
ADMINISTRATORS				
Public Sector	440*	120	56	46.7
Private Sector	49	25	6	24.0
Atypical Sector	361	31	23	74.2
COUNSELORS				
Public Sector	597	94	44	46.8
Private Sector	13	13	10	76.9
Atypical Sector	8	8	3	37.5
INSTRUCTORS				
Public Sector	4,885	573	224	39.1
Private Sector	150	30	1	3.3
Atypical Sector	593	59	40	67.8
STUDENTS				
Public Sector	31,755	316	138	43.7
Private Sector	2,258	30	13	43.3
Atypical Sector	7,748	188	109	58.0
TOTAL				
Public Sector	38,075	1,184	521	44.0
Private Sector	2,616	147	56	38.1
Atypical Sector	9,147	286	175	61.2
RECAPITULATION BY SUBPOPULATION				
Institutions	602	159	85	53.5
Administrators	850	176	85	48.3
Counselors	617	114	57	50.0
Instructors	5,628	662	265	40.0
Students	41,761	534	260	48.7
TOTAL	49,458	1,645	752	45.7

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*Includes State Department Vocational Personnel and Local Chairpersons decided to present these tables at this point in the study, combining both sample and response data, in order to facilitate the analysis and interpretation of the data. Table 30, page 143, contains a summary of sample and response by instrument.

Sampling

The basic technique of the study was to solicit response to (1) a set of demographic descriptions, and (2) a set of subjective questionnaires sampling (a) institutional, (b) personnel, and (c) student opinions relative to the subject of vocational education articulation. In the process, four basic sampling procedures were used:

1. random sampling - wherever the entire population unit was available to the researchers, a representative sample was selected so that each individual in the defined population had an equal chance of being included. The specific procedure used in the study was random sampling without replacement and was determined either by the use of random number tables or by the application of computer program in the FORTRAN IV language designed for this purpose by one of the researchers.
2. systematic sampling - this procedure differs from the random approach in that each member was not chosen independently. Instead, the first selection was made via a random number. Then, each succeeding selection was automatically determined to be every nth person. Care was taken to make sure that this procedure was only used where random sampling was not feasible. In particular, care was taken to avoid periodicity across the nth selections; i.e., to avoid the possibility of every nth person possessing a characteristic not shared by the entire population. In general, this technique was used where the population pool was broken into units

defying common definition, other than their incremental proportions of N. In short, this method was used where the record keeping procedures lacked uniformity and, in themselves, therefore, represented a kind of natural random order.

3. stratified sampling - samples were selected in such a way as to assure that certain subgroups would be represented in the study; for example, sampling across content areas necessitated a stratification within the total sample of secondary school instructors within the general survey.
4. cluster sampling - this method was used where the individual members could not be accurately identified but where their probable occurrence within a natural group was thought to be high. This technique was used to provide the best possible representation from the rather ill-defined population of apprenticeship program personnel and is discussed in detail later on in this section.

The guidelines for determining the sample size within all of the sampling methods used were as follows:

Size of Group	Minimum Portion of Membership Required
less than 30	100%
30 to 99	minimum of 30 members
100 to 299	20%
300 to 4999	10%
5000 and over	1%

General Survey

Populations to be sampled for the General Survey were first stratified into three subpopulations: public sector, private sector, and miscellaneous. The public and private sectors were further stratified into secondary schools and postsecondary schools and then divided among the categories of administrator, counselor, and instructor. Further delimitations were made producing strata among administrators known as local directors of vocational education centers (secondary schools), superintendents of area vocational-technical schools, and presidents of community colleges and state technical institutes (postsecondary schools). Postsecondary school counselors were also divided between community colleges and state technical institutes for purposes of the General Survey.

Secondary school instructors were identified as belonging to the following eight (8) categories: agriculture, distributive education, health occupations education, home economics, office occupations education, special programs, technical education and trade and industrial occupations, in accordance with the approved nomenclature of the U.S. Office of Education Code list. Resulting sample n's are contained in Tables 5 and 6. Table 8 shows these samples in composite form.

Populations were also sampled from the miscellaneous group of state department vocational education personnel and of chairpersons of local advisory councils. The method of selection used for these two groups was direct random sampling as described earlier. Table 5 identifies these samples.

Non-Respondent Survey

One of the inherent biases of questionnaire-type surveys is that their responses are dependent on voluntarism, the tendency for only those with a specific interest to respond. In an attempt to determine the degree to which the opinions of those completing the survey might be similar to the opinions of those who chose not to respond, a non-respondent survey was conducted on the administrators, counselors, and instructors who had not previously answered the General Survey.

This survey was conducted by telephone on a sample of 33 non-respondents, chosen at random using the same general survey instrument as that completed by the original respondents. All but one of the sample (97 percent) responded. Results are included in the "Findings" section of the study.

Institutional Survey

Demographic data and subjective responses were gathered from the institutions involved in the General Survey via a separate questionnaire called Institutional Survey. This survey sampled the secondary and postsecondary schools' populations previously defined and stratified them into divisions of public and private. Sample institutions were then chosen by random sampling without replacement. Actual members in this group were the chief administrative officers of each institution. Tables 5 and 6 show the representative n's for the stratified samples herein. Table 8 presents them in composite form. In Table 6, there is an asterisk following the figure representing the sample n for institutions. By formula, the required sample should have been 20 percent of 117, or 23 institutions, and, in the beginning, it was. In explaining this phenomenon, it was noted during this portion of the study that a very unstable population was being defined. For example, working from the two source lists provided, the study defined 136 members of this population, several of which were apparent duplications. In addition, early attempts to produce a final sample evidenced a much higher attrition rate than experienced in the other units of the Institutional Survey. By the time the sample was surveyed, 19 (14 percent) of the 136 were deleted, and a sample of 23 (20 percent) was selected from the remaining 117. The sample of 23 was solicited, and 3 of those subsequently proved not to have been deliverable, leaving the stated balance of 20.

Student Survey

The study identified 31,755 postsecondary students as the student population to be surveyed. Because this population was large enough to predict equal representation, a rather small sample n (1 percent) was justified. That n was randomly selected from the total N and was enlarged only when necessary to assure representation for each institution.

However, in a few institutions from whom students had been selected for the sample records were in a condition such as to make the application of random sampling logistics impractical. In these instances, exception was made to allow the use of systematic sampling techniques wherein the original sample numbers for these groups were replaced with one originating random number, in addition to which each nth student therefrom was chosen until the orginally desired sample unit was obtained. Tables 5 and 6 state the resultant n's, and Table 8 shows the total involved.

Survey of Vocational Programs

The Survey of Vocational Programs was designed for use with those populations in the atypical sector of the study that include Comprehensive Employment and Training Act (CETA) programs, correctional institution vocational programs, and apprenticeship programs. The survey was administered to selected administrators, counselors, and/or instructors in much the same way the the General Survey was used in the public and private sectors of the study. Tables 7 and 8 show the sample structures in various combinations.

The double asterisks (**) in Table 7 indicate that complete personnel descriptors for apprenticeship personnel were not available to the researchers, as mentioned earlier in the discussion of sampling methods. Thus, it was virtually impossible to define populations for apprenticeship administrators or instructors. However, researcher observation indicated that the majority of groups would probably not have more than two (2) personnel, at least one of which would be an administrator and one of which would be an instructor (the administrator would most probably instruct as well). Since the probable occurrence of personnel in this ratio was thought to be high, and since a more conservative sampling approach was not feasible, the cluster sampling method was used, assuming equal representation of administrators and instructors within the total sample of apprenticeship personnel.

Vocational Student Survey

Students sampled for purposes of the Vocational Student Survey across atypical areas is numerically summarized in Tables 7 and 8. Random sampling without replacement was the method used, with some exceptions. In some groups, it was more feasible to use a systematic sampling technique.

In the case of apprenticeship programs and, in particular, prior to the application of random sampling, the total population was stratified as to the five (5) administrative districts in the state, and the total sample was proportioned to assure essentially equal representation across districts. This action was taken because of unequal program characteristics between the districts. For example, TVA represented 1800 of the 2000 members of the state administered area, a characteristic not observed in the other districts.

Response

In Table 5, in the sub-heading "Secondary Instructors by Content Area," the statistics reflect all responses in this category on the General Survey questionnaire. Thus, if a respondent indicated responsibilities in several content areas, each and every response was accumulated in the totals. Therefore, these totals are reported as "Content Area Indications" and "% of Total Indication" to avoid confusion with the headings of "Response" and "Response as % of N" used elsewhere in Table 5 (see the note at the bottom of Table 5).

The technique generally used to administer the survey was that a packet was sent to the best available addressee. By "best available addressee" was meant the addressee most nearly representative of the sample nomenclature. For example, if the name and address of a student were available, the packet was sent to him, if not, to his instructor, counselor, or administrator, in that order, for distribution to the unknown intended samplee.

In each packet was (1) a cover letter, (2) the necessary questionnaire or questionnaires, (3) instructions, (4) a stamped, self-addressed return envelope in which to return the questionnaire, and (5) a stamped self-addressed return card to be mailed separately indicating that the samplee had complied with the requested action. At each step removed from the samplee, master packets were prepared, including samplees' materials and additional cover instructions, for the intermediary. Copies of the correspondence used are included in Appendix B.

In instances in which response percentages were not rapidly generated, follow-up reminder cards were sent to the original "best available addressee" for distribution and/or action to achieve the hoped-for motivation.

In some instances, telephone follow-ups were used as a last resort technique. This method was used with proprietary school administrators and private sector secondary school principals. While such a forcing technique could be argued to bias the study, it was concluded that any resulting bias would be offset by the advantage gained through achieving a representative response from the areas.

Telephone contact was also used as a part of the administration of the survey in the case of all of the atypical populations. However, its use there was to shorten the time for response so that the study could be concluded earlier than would have been possible otherwise. Furthermore, this contact was restricted to the directors and administrators responsible for distribution of the materials to the subgroups.

It should be reported that certain responses were not reflected in the sample and response summaries herein. They were of the type represented by the following lines quoted from a letter received in response to one of the packet mailings:

> Our apprenticeship training program is based upon job analysis data for the preparation of specific employee skills in selected trades. Therefore, we do not feel qualified to respond effectively regarding current educational programs, validity of student services, and articulation with other educational levels of instruction.

Such responses were not included in the response statistics but were noted by the researchers as observed evidence of a lack of articulation. Most similar responses were traceable to the atypical group areas, although a few were received from private secondary school principals and from proprietary school administrators.

Data Analysis

All data were computer analyzed using either FORTRAN programs or programs from the Statistical Package for the Social Sciences. Since the purposes of the project were largely descriptive, the analyses consisted almost exclusively of frequency counts, means, and percentages.

CHAPTER IV

FINDINGS

Findings presented in this chapter have been formulated from the data collected from the General Survey (sent to administrators, instructors, and counselors in secondary and postsecondary institutions), the Institutional Survey: Secondary Schools (sent to principals), the Institutional Survey: Postsecondary Schools (sent to administrators), the Postsecondary Student Survey (sent to students), the Survey of Vocational Programs (sent to administrators, instructors and counselors in Comprehensive Employment and Training Act (CETA) programs, programs in correctional institutions, and apprenticeship programs), and the Survey of Vocational Students (sent to students in CETA, and correctional institutions; and apprenticeship programs). A presentation about demographic data precedes statements about data gathered from questions and statements. Table 8, page 44, contains information about sample size and percentage of response by group.

General Survey

When interpreting the tables about aiding and inhibiting factors, the reader should remember that, first, the respondents were asked to choose four aiding factors and four inhibiting factors from the same list of 43 factors. The respondents did not rank any factors, but chose those that were signficant to them. Second, only the ten factors with the highest frequencies are presented in the tables presenting aiding and inhibiting factors. These are the top ten factors of 43; i.e., they represent approximately the most frequently chosen or most salient factors. Since only the first ten factors have been presented, the reader should not make inferences that would be warranted had the tables ranked ten out of ten factors. The difference between factors ranked first and tenth, for example, is much more significant when there have been only ten choices; however, when 43 factors are being considered, factors ranked first and tenth represent factors that may each be interpreted as significant.

A similar situation exists in interpreting the suggestion. The respondents were asked to choose five of 23 possible suggestions; therefore, the ten suggestions represent approximately the top half of suggestions listed by respondents.

Finally, the reader will notice that the private sector has received less attention in the tables and in the narrative than the public sector. The reason for this is due to the small number of respondents from the private institutions. The reader will note that there are not always ten factors listed on tables dealing with the private sector. This is because either (1) an inordinate number of tied factors followed those listed, or (2) the frequencies of the factors were so small as to be meaningless.

Respondents to the General Survey (N=367) included personnel from combination public high schools and vocational centers (99), public high schools (64), state area vocational schools (60), community colleges (58), state technical institutes (51), proprietary schools (17), and other public institutions (4). Twelve did not indicate an affiliation with any school. Because the respondents indicated that they were involved with one or more of the eight program areas covered by the study, the number of programs (614) totaled substantially more than the respondents: agriculture (42), distributive education (50), health occupations education (81), home economics (61), office occupations education (110), technical education (96), trade and industrial occupations (124), and special programs (50). All developmental districts in the state were represented by the respondents. The East Tennessee district had the greatest number of survey participants (84) followed by Mid-Cumberland

(41), Memphis Delta (36), Southeast Tennessee (32), South Central Tennessee (30), Southwest Tennessee (29), Upper Cumberland and Northwest Tennessee (21 each), and First Tennessee (4). Sixty-nine respondents did not indicate their districts. Positions in vocational education indicate on the surveys returned were administrator (73), of whom 20 were in secondary schools, 53 in postsecondary institutions; instructor (224), of whom 115 were in secondary schools, 109 in postsecondary institutions; guidance counselor (45), of whom 28 were in secondary schools, 17 in postsecondary institutions; and State Department of Education personnel (13), six of whom were in the Nashville office, seven in developmental district offices. Not classified were 12 persons. Respondents indicated that 49 belonged to a vocational education advisory committee and 60 on a school program committee. No one indicated membership on a district program council.

From a list of 43 factors, the 367 respondents were asked to choose four factors that inhibit articulation. Table 9 contains the ranking of the first ten factors; Appendix C contains a list of all inhibiting factors presented by frequency count and the percentage of respondents who chose the factors. The list includes the items about the shortage of guidance and student service personnel (ranked first) and inadequate training procedures for them (ranked seventh); lack of formal articulation agreements among institutions within Tennessee (ranked second), separatism (concern of vocational education personnel primarily with their own institutions and programs - ranked third), and the absence of a clear articulation policy by a statewide governing agency (ranked fourth); failure to involve employers in curriculum planning (ranked fifth); lack of standardized statewide course/program objectives (ranked eighth); faculty load (ranked sixth); a shortage of qualified teachers (ranked ninth); and a lack of competency-based or skill measurement criteria for

Table 9

Factors Identified by All Respondents (N=367) to the General Survey that Inhibit the Articulation Process, by Rank Order and Frequency

Factor		Rank	Frequency	% of N
8	Shortage of guidance and student service personnel	1	114	31.06
16	Lack of formal articulation agreements between institutions within the State	2	92	25.07
19	Separatism - tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program	3	90	24.52
36	Absence of clear articulation policy by a statewide governing agency	4	85	23.16
12	Failure to involve employers in curriculum planning	5	84	22.89
5	Faculty load	6	81	22.07
9	Inadequate training procedures for guidance and student service personnel	7	76	20.71
14	Lack of standardized statewide course/program objectives	8	75	20.44
6	Shortage of qualified teachers	9	71	19.35
30	Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	10	63	17.17

recognition of proficiencies for occupational education (ranked tenth).

Table 10 presents a listing of factors identified by both public and private respondents that inhibit the articulation process. Inasmuch as the public respondents (N=336) constituted 91.5 percent of the total of all respondents, their rank order of items was the same as the overall ranking, but the percentages of their total responses changed somewhat. Private respondents (N=17) identified seven items named by public respondents but did not rank them in the same order. They chose one factor not listed elsewhere, "Lack of secondary/postsecondary joint development of competency examinations" (ranked sixth). Because of low frequencies, only eight items were considered for purposes of comparison.

Table 11 depicts a listing of factors identified by both public secondary personnel (N=163) and public postsecondary (N=173) that inhibit the articulation process. Secondary personnel chose the same factors ranked by all respondents, but ordered them differently, factors 12, 5, 6, and 16 varying from the original sequence. They put greater emphasis on factor eight than did the total group. Postsecondary personnel chose nine of the ten factors that all respondents chose and ordered them in a sequence differing from that of all respondents and the public secondary personnel. They included as their eighth-ranked choice the lack of knowledge of related vocational education programs.

Table 12 is a listing of factors identified by public administrators (N=65), instructors (N=214), and counselors (N=44) that inhibit the articulation process. Administrators named nine factors common to all respondents, but ordered them differently, and chose five others (ranked ninth) to extend their list to thirteen. They were added because of similar frequency counts for the items: "Concern and efforts of individual teachers," "Lack of

Table 10

Factors Identified by Public and Private Respondents to the General Survey that Inhibit the Articulation Process, by Rank Order and Frequency

Factor		Public Respondents (N=336) Rank	Frequency	% of N
8	Shortage of guidance and student service personnel	1	107	31.85
16	Lack of formal articulation agreements between institutions within the state	2	90	26.79
19	Separatism tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program	3	83	24.70
36	Absence of clear articulation policy by a statewide governing agency	4	82	24.40
12	Failure to involve employers in curriculum planning	5	73	21.73
5	Faculty load	6	73	21.73
14	Lack of standardized statewide course/program objectives	7	70	20.83
9	Inadequate training procedures for guidance and student service personnel	8	66	19.64
6	Shortage of qualified teachers	9	62	18.45
30	Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	10	59	17.56

Factor		Private Respondents (N=17) Rank	Frequency	% of N
12	Failure to involve employers in curriculum planning	1	8	47.06
6	Shortage of qualified teachers	2	7	41.18
5	Faculty load	3	6	35.29
9	Inadequate training procedures for guidance and student service personnel	4	5	29.41
8	Shortage of guidance and student service personnel	5	4	23.53
14	Lack of standardized statewide course/program objectives	6	3	17.65
29	Lack of secondary/postsecondary joint development of competency examinations	6	3	17.65
30	Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	6	3	17.65

Table 11

Factors Identified by Public Secondary Personnel and Public Postsecondary Personnel Responding to the General Survey that Inhibit the Articulation Process, by Rank Order and Frequency

Secondary Personnel (N=163)				Postsecondary Personnel (N=173)			
Factor	Rank	Frequency	% of N	Factor	Rank	Frequency	% of N
8 Shortage of guidance and student service personnel	1	72	44.17	16 Lack of formal articulation agreements between institutions within the state	1	58	33.53
12 Failure to involve employers in curriculum planning	2	41	25.15	19 Separatism tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program	2	47	27.17
19 Separatism tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program	3	36	22.09	36 Absence of clear articulation policy by a statewide governing agency	2	47	27.17
36 Absence of clear articulation policy by a statewide governing agency	4	35	21.47	5 Faculty load	4	39	22.54
5 Faculty load	5	34	20.86	14 Lack of standardized statewide course/ program objectives	5	36	20.81
14 Lack of standardized statewide course/ program objective	5	34	20.86	8 Shortage of guidance and student service personnel	6	35	20.23
6 Shortage of qualified teachers	7	33	20.25	30 Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	6	35	20.23
9 Inadequate training procedures for guidance and student service personnel	7	33	20.25	40 Lack of knowledge of related vocational education programs	8	34	19.65
16 Lack of formal articulation agreements between institutions within the state	9	32	19.63	9 Inadequate training procedures for guidance and student service personnel	9	33	19.08
30 Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	10	24	14.72	12 Failure to involve employers in curriculum planning	10	32	18.50

Table 12

Factors Identified by Public Administrators, Public Instructors, and Public Counselors Responding to the General Survey that Inhibit the Articulation Process, by Rank Order and Frequency

	Administrators (N=65)			
Factor		Rank	Frequency	% of N
16	Lack of formal articulation agreements between institutions within the state	1	24	36.92
19	Separatism tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program	1	24	36.92
8	Shortage of guidance and student service personnel	3	23	35.38
36	Absence of clear articulation policy by a statewide governing agency	4	18	27.69
14	Lack of standardized statewide course/program objectives	5	16	24.62
9	Inadequate training procedures for guidance and student service personnel	6	15	23.08
6	Shortage of qualified teachers	7	13	20.00
30	Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	8	11	16.92
5	Faculty load	9	9	13.85
7	Concern and efforts of individual teachers	9	9	13.85
33	Lack of secondary/postsecondary cooperative approach to developing curriculum at the local level	9	9	13.85
35	Lack of state level forums for discussing, sharing concerns, and resolving problems	9	9	13.85
18	Separate control of secondary and postsecondary institutions	9	9	13.85

Table 12 Continued

Factor	Instructors (N=214)	Rank	Frequency	% of N
8	Shortage of guidance and student service personnel	1	59	27.57
5	Faculty load	2	58	27.10
36	Absence of clear articulation policy by a statewide governing agency	2	58	27.10
12	Failure to involve employers in curriculum planning	4	50	23.36
16	Lack of formal articulation agreements between institutions within the state	4	50	23.36
9	Inadequate training procedures for guidance and student service personnel	5	48	22.43
14	Lack of standardized statewide/course program objectives	6	47	21.96
19	Separatism tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program	7	43	20.09
40	Lack of knowledge of related vocational education programs	8	41	19.16
6	Shortage of qualified teachers	9	39	18.22
30	Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	9	39	18.22

Table 12 Continued

Factor Counselors (N=44)		Rank	Frequency	% of N
8	Shortage of guidance and student service personnel	1	21	47.73
16	Lack of formal articulation agreements between institutions within the state	2	13	29.55
12	Failure to involve employers in curriculum planning	3	12	27.27
19	Separatism tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program	4	11	25.00
40	Lack of knowledge of related vocational education problems	5	10	22.73
6	Shortage of qualified teachers	6	8	18.18
14	Lack of standardized statewide course/ program objectives	6	8	18.18
27	Lack of single local advisory committee common to both secondary and postsecondary for each content area	6	8	18.18
29	Lack of secondary/postsecondary joint development of competency examinations	9	7	15.91
30	Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education	9	7	15.91
33	Lack of secondary/postsecondary cooperative approach to developing curriculum at the local level	9	7	15.91
35	Lack of state level forums for discussing, sharing concerns, and resolving problems	9	7	15.91

secondary/postsecondary cooperative approach to developing curriculum at the local level," "Lack of state level forums for discussing, sharing concerns, and resolving problems," and "Separate control of secondary and postsecondary institutions." Instructors also named nine factors common to all respondents, ordered them differently, and chose an additional factor for the list: "Lack of knowledge of related vocational education programs" (ranked eighth). Twelve factors were listed for counselors because of tied ranks. Counselors chose six factors listed by all respondents and repeated three listed by either administrators ("Lack of secondary/postsecondary cooperative approach to developing curriculum at the local level" - ranked ninth - and "Lack of state level forums for discussing, sharing concerns, and resolving problems," also ranked ninth) or instructors ("Lack of knowledge of related vocational education problems," ranked fifth). They added two others not appearing on other lists: "Lack of a single advisory committee common to both secondary and postsecondary for each content area" (ranked sixth) and "Lack of secondary/postsecondary joint development of competency examinations" (ranked ninth).

Table 13 contains a ranking of the first ten factors that aid the articulation process. Appendix C contains a list of all aiding factors presented by frequency count and the percentage of respondents who chose the factors. Respondents ranked the concern and efforts of individual teachers and the concern and efforts of guidance and student service personnel first and third, respectively. They advocated state level forums for discussing, sharing concerns, and resolving problems (ranked seventh), leadership of the state department of education (ranked eighth), and statewide standardized course/program objectives (ranked ninth). The involvement of employers in curriculum planning was ranked second; other agency involvement to encourage articulation, tenth. They ranked fourth the awarding to students of advanced placement or

Table 13

Factors Identified by All Respondents (N=367) to the General Survey that Aid the Articulation Process, by Rank Order and Frequency

Factor		Rank	Frequency	% of N
7	Concern and efforts of individual teachers	1	183	49.86
11	Involvement of employers in curriculum planning	2	125	34.06
10	Concern and efforts of guidance and student service personnel	3	108	29.43
20	Awarding of advanced placement or credit for competency, previous course work, military experience, or work experience	4	91	24.80
39	Adequate knowledge of related vocational education programs	5	72	19.62
4	Joint secondary and postsecondary staff development workshops	6	65	17.71
34	State level forums for discussing, sharing concerns, and resolving problems	7	63	17.17
38	Leadership of the State Department of Education	8	60	16.35
13	Statewide standardized course/program objectives	9	53	14.44
1	Other agency involvement to encourage articulation	10	48	13.08

credit for competency, previous course work, military experience, or work experience; adequate knowledge of related vocational education programs, fifth; and joint secondary and postsecondary staff development workshops, sixth.

In Table 14 a listing is made of factors identified by public and private respondents that aid the articulation process. The list of items is the same for the public sector as it is for all respondents except that the order of items four and thirty-four is reversed. Private respondents identified seven factors named by the public respondents but did not rank them in the same order. They chose two factors not listed elsewhere, one dealing with contracting with groups offering specialized training (ranked sixth); the other, with formal articulation agreements between institutions within the state (ranked seventh). The list was limited to nine choices because of low frequency counts for the remaining factors.

In Table 15 a listing is made of factors identified by public secondary personnel and public postsecondary personnel that aid the articulation process. Secondary personnel identified eight factors that all respondents identified, ordered them differently, and chose two others not named by others: "Separate secondary and postsecondary staff development workshops" (ranked eighth) and "Joint secondary and postsecondary staff development workshops (ranked tenth). Postsecondary personnel identified eight factors chosen by all respondents, but ordered them differently, and chose three other statements not named by others: "Other agency involvement to encourage articulation" (ranked eighth), "Formal articulation agreements between institutions within the state" (ranked ninth), and "Regional/local advisory councils on vocational articulation" (ranked tenth). The postsecondary list included eleven factors because of equal frequencies for the tenth-ranked

Table 14

Factors Identified by Public Respondents and Private Respondents to the General Survey that Aid the Articulation Process, by Rank Order and Frequency

	Public Respondents (N=336)		
Factor	Rank	Frequency	% of N
7 Concern and efforts of individual teachers	1	167	49.70
11 Involvement of employers in curriculum planning	2	118	35.12
10 Concern and efforts of guidance and student service personnel	3	100	29.76
20 Awarding of advanced placement or credit for competency, course work, military experience, or work experience	4	88	26.19
39 Adequate knowledge of related vocational education programs	5	67	19.94
34 State level forums for discussing, sharing concerns, and resolving problems	6	55	16.37
4 Joint secondary and postsecondary staff development workshops	7	53	15.77
38 Leadership of the State Department of Education	7	53	15.77
13 Statewide standardized course/program objectives	9	49	14.58
1 Other agency involvement to encourage articulation	10	46	13.69

	Private Respondents (N=17)		
FACTOR	Rank	Frequency	% of N
7 Concern and efforts of individual teachers	1	13	76.47
4 Joint secondary and postsecondary staff development workshops	2	7	41.18
34 State level forums for discussing, sharing concerns, and resolving problems	3	6	35.29
10 Concern and efforts of guidance and student service personnel	4	5	29.41
11 Involvement of employers in curriculum planning	4	5	29.41
43 Contracting with external institutions and agencies which can best provide specialized training	6	4	23.53
13 Statewide standardized course/program objectives	7	3	17.65
15 Formal articulation agreements between institutions within the state	7	3	17.65
38 Leadership of the State Department of Education	7	3	17.65

Table 15

Factors Identified by Public Secondary Personnel and Public Postsecondary Personnel Responding to the General Survey that Aid the Articulation Process, by Rank Order and Frequency

Secondary Personnel (N=163)				
Factor		Rank	Frequency	% of N
7	Concern and efforts of individual teachers	1	84	51.53
10	Concern and efforts of guidance and student service personnel	2	45	27.61
11	Involvement of employers in curriculum planning	2	45	27.61
38	Leadership of the State Department of Education	4	38	23.31
39	Adequate knowledge of related vocational education programs	5	34	20.86
20	Awarding of advanced placement or credit for competency, course work, military experience, or work experience	6	29	17.79
34	State level forums for discussing, sharing concerns, and resolving problems	7	28	17.18
3	Separate secondary and postsecondary staff development workshops	8	27	16.56
13	Statewide standardized course/program objectives	8	27	16.56
4	Joint secondary and postsecondary staff development workshops	10	24	14.72

Postsecondary Personnel (N=173)				
Factor		Rank	Frequency	% of N
7	Concern and efforts of individual teachers	1	83	47.98
11	Involvement of employers in curriculum planning	2	73	42.20
20	Awarding of advanced placement or credit for competency, course work, military experience, or work experience	3	59	34.10
10	Concern and efforts of guidance and student service personnel	4	55	31.79
39	Adequate knowledge of related vocational education programs	5	33	19.08
4	Joint secondary and postsecondary staff development workshops	6	29	16.76
34	State level forums for discussing, sharing concerns, and resolving problems	7	27	15.61
1	Other agency involvement to encourage articulation (example: working closely with CETA or a manpower advisory council to avoid duplication)	8	25	14.45
15	Formal articulation agreements between institutions within the state	9	24	13.87
13	Statewide standardized course/program objectives	10	22	12.72
41	Regional/local advisory councils on vocational education	10	22	12.72

factors.

Table 16 is a listing of factors identified by public administrators, instructors, and counselors that aid the articulation process. Administrators named nine factors attributed to all respondents, ordered them differently from all groups and added their tenth factor, "Formal articulation agreements between institutions within the state" (ranked seventh). Instructors listed nine factors identified by all respondents, ordered them differently from other groups, and added one factor that did not appear elsewhere, "Separate secondary and postsecondary staff development workshops" (ranked tenth). Counselors listed nine of the ten factors listed by all respondents, ordered them in a dissimilar fashion from others, and added "Formal articulation agreements between institutions within the state" (ranked seventh).

Table 17 lists in rank order suggestions identified in the General Survey to improve the articulation process. Appendix C lists frequencies for all suggestions and the percentage of respondents who chose the factors. The respondents recommended both an increased involvement of business and industry in curriculum development (ranked first) and development of better labor market data for program planning (ranked forth). They suggested periodic meetings of vocational education personnel from various levels for planning articulation (ranked second) and released time for inservice days for this activity (ranked fifth). They advocated the establishment of a statewide committee to coordinate the development of program articulation between secondary and postsecondary institutions (ranked third), development of statewide standardized course/program objectives and competencies for secondary and postsecondary schools (ranked seventh), development of state guidelines for articulation agreements between institutions (ranked eighth), and development of a clear articulation policy by a statewide governing agency (ranked

Table 16

Factors Identified by Public Administrators, Public Instructors, and Public Counselors Responding to the General Survey that Aid the Articulation Process, by Rank Order and Frequency

	Administrators (N=65)			
Factor		Rank	Frequency	% of N
7	Concern and efforts of individual teachers	1	28	43.08
11	Involvement of employers in curriculum planning	2	24	36.92
20	Awarding of advanced placement or credit for competency, course work, military experience, or work experience	3	21	32.31
10	Concern and efforts of guidance and student service personnel	4	17	26.15
34	State level forums for discussing, sharing concerns, and resolving problems	4	17	26.15
4	Joint secondary and postsecondary staff development workshops	6	14	21.54
15	Formal articulation agreements between institutions within the state	7	11	16.92
1	Other agency involvement to encourage articulation	8	10	15.38
39	Adequate knowledge of related vocational education programs	8	10	15.38
13	Statewide standardized course/program objectives	9	9	13.85

Table 16 Continued

Factors	Instructors (N=214)	Rank	Frequency	% of N
7	Concern and efforts of individual teachers	1	115	53.74
11	Involvement of employers in curriculum planning	2	79	36.92
20	Awarding of advanced placement or credit for competency, course work, military experience, or work experience	3	56	26.17
10	Concern and efforts of guidance and student service personnel	4	53	24.77
39	Adequate knowledge of related vocational education programs	5	43	20.09
13	Statewide standardized course/ program objectives	6	36	16.82
4	Joint secondary and postsecondary staff development workshops	7	34	15.89
34	State level forums for discussing, sharing concerns, and resolving problems	8	32	14.95
38	Leadership of the State Department of Education	8	32	14.95
3	Separate secondary and postsecondary staff development workshops	10	30	14.02

Table 16 Continued

Factor		Counselors (N=44) Rank	Frequency	% of N
10	Concern and efforts of guidance and student service personnel	1	28	63.64
7	Concern and efforts of individual teachers	2	25	56.82
11	Involvement of employers in curriculum planning	3	12	27.27
39	Adequate knowledge of related vocational education programs	4	11	25.00
20	Awarding of advanced placement or credit for competency, course work, military experience, or work experience	5	10	22.73
38	Leadership of the State Department of Education	6	9	20.45
1	Other agency involvement to encourage articulation	7	6	13.64
4	Joint secondary and postsecondary staff development workshops	7	6	13.64
15	Formal articulation agreements between institutions within the state	7	6	13.64

Table 17

Suggestions Identified by All Respondents (N=367) to the General Survey to Improve the Articulation Process, by Rank Order and Frequency

Factor	Rank	Frequency	% of N
4 Increased involvement of business and industry in curriculum development	1	178	48.50
13 Periodic meeting of vocational education personnel from various levels for planning articulation	2	150	40.87
1 Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions	3	127	34.61
6 Development of better labor market data for program planning	4	121	32.97
11 Release time/in-service days for participation in articulation planning	5	109	29.70
3 Identification of the occupational education role for each type of institution	6	104	28.34
15 Development of statewide standardized course/program objectives and competencies for secondary and postsecondary	7	102	27.79
8 Development of state guidelines for articulation agreements between institutions	8	96	26.16
22 Development of a clear articulation policy by a statewide governing agency	9	87	23.71
5 Resolution of the issue of credit transfer between institutions	10	80	21.80

ninth). Respondents also urged the identification of the occupational education role for each type of institution (ranked sixth) and the resolution of the issue of credit transfer between institutions (ranked tenth).

Table 18 gives a listing of suggestions by both public and private respondents to improve the articulation process. The public sector is identical to all respondents in its ranking of factors though slightly different in its percentages of total choices. The private respondents listed eight of the same factors as all respondents but ordered them differently. They chose two other items not on other lists to complete their choices, one dealing with improving leadership at the state level (ranked third); the other, provision of developmental, or remedial, programs (ranked seventh).

Table 19 presents a listing of suggestions by public secondary personnel and public postsecondary personnel that improve the articulation process. Secondary personnel identified nine factors identified by all respondents, but ordered them differently, and chose "Secondary/postsecondary joint development of individualized instruction packages" as their tenth listing. Postsecondary personnel also chose nine of the ten factors identified by all respondents, also ordered them differently, and chose "Release time/inservice days for participating in articulation planning" (ranked tenth).

Table 20 is a listing of suggestions by public administrators, instructors, and counselors to improve the articulation process. Administrators listed nine of the factors chosen by all respondents, ordered them differently from others and added to its list "Secondary/postsecondary cooperative approach to curriculum development" (ranked seventh). Instructors listed all of the factors chosen by all respondents but ordered them only slightly differently from all respondents. Counselors listed nine factors chosen by all respondents, ordered them differently from others, and added one

Table 18

Suggestions Identified by Public Respondents and Private Respondents to the General Survey to Improve the Articulation Process, by Rank Order and Frequency

Public Respondents (N=336)			
Factor	Rank	Frequency	% of N
4 Increased involvement of business and industry in curriculum development	1	164	48.81
13 Periodic meeting of vocational education personnel from various levels for planning articulation	2	133	39.58
1 Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions	3	120	35.71
6 Development of better labor market data for program planning	4	113	33.63
11 Release time/in-service days for participation in articulation planning	5	99	29.46
3 Identification of the occupational education role for each type of institution	6	94	27.98
15 Development of statewide standardized course/ program objectives and competencies for secondary and postsecondary	6	94	27.98
8 Development of state guidelines for articulation agreements between institutions	8	86	25.60
22 Development of a clear articulation policy by a statewide governing agency	9	84	25.00
5 Resolution of the issue of credit transfer between institutions	10	75	22.32

Private Respondents (N=17)			
Factor	Rank	Frequency	% of N
4 Increased involvement of business and industry in curriculum development	1	8	47.06
13 Periodic meeting of vocational education personnel from various levels for planning articulation	1	8	47.06
6 Development of better labor market data for program planning	3	6	35.29
23 Improved leadership at the state level	3	6	35.29
8 Development of state guidelines for articulation agreements between institutions	5	5	29.41
15 Development of statewide standardized course/ program objectives and competencies for secondary and postsecondary	5	5	29.41
3 Identification of the occupational education role for each type of institution	7	4	23.53
5 Resolution of the issue of credit transfer between institutions	7	4	23.53
7 Provision of developmental, or remedial, programs	7	4	23.53
11 Release time/in-service days for participation in articulation planning	7	4	23.53

Table 19

Suggestions Identified by Public Secondary Personnel and Public Postsecondary Personnel Responding to the General Survey to Improve the Articulation Process, by Rank Order and Frequency

Secondary Personnel (N=163)				Postsecondary Personnel (N=173)			
Factor	Rank	Frequency	% of N	Factor	Rank	Frequency	% of N
4 Increased involvement of business and industry in curriculum development	1	80	49.08	4 Increased involvement of business and industry in curriculum development	1	84	48.55
13 Periodic meeting of vocational education personnel from various levels for planning articulation	2	73	44.7[illegible]	13 Periodic meeting of vocational education personnel from various levels for planning articulation	2	60	34.68
6 Development of better labor market data for program planning	3	62	38.04	1 Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions	3	59	34.10
11 Release time/in-service days for participation in articulation planning	4	62	38.04	5 Resolution of the issue of credit transfer between institutions	4	57	32.95
1 Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions	5	61	37.42	3 Identification of the occupational education role for each type of institution	5	54	31.21
15 Development of statewide standardized course/program objectives and competencies for secondary and postsecondary	6	48	29.45	6 Development of better labor market data for program planning	6	51	29.48
3 Identification of the occupational education role for each type of institution	7	40	24.54	8 Development of state guidelines for articulation agreements between institutions	6	51	29.48
22 Development of a clear articulation policy by a statewide governing agency	8	39	23.93	15 Development of statewide standardized course/program objectives and competencies for secondary and postsecondary	8	46	26.59
8 Development of state guidelines for articulation agreements between institutions	9	35	21.47	22 Development of a clear articulation policy by a statewide governing agency	9	45	26.01
2 Secondary/postsecondary joint development of individualized instruction packages	10	32	19.63	11 Release time/in-service days for participation in articulation planning	10	37	21.39

Table 20

Suggestions Identified by Public Administrators, Public Instructors, and Public Counselors Responding to the General Survey to Improve the Articulation Process, by Rank Order and Frequency

	Administrators (N=65)			
Factor		Rank	Frequency	% of N
13	Periodic meeting of vocational education personnel from various levels for planning articulation	1	29	44.62
3	Identification of the occupational education role for each type of institution	2	25	38.46
4	Increased involvement of business and industry in curriculum development	2	25	38.46
1	Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions	3	23	35.38
8	Development of state guidelines for articulation agreements between institutions	4	22	33.85
5	Resolution of the issue of credit transfer between institutions	5	20	30.77
6	Development of better labor market data for program planning	5	20	30.77
22	Development of a clear articulation policy by a statewide governing agency	5	20	30.77
15	Development of statewide standardized course/program objectives and competencies for secondary and postsecondary	6	17	26.15
21	Secondary/postsecondary cooperative approach to developing curriculum	7	16	24.62

Table 20 Continued

Factor	Instructors (N=214)	Rank	Frequency	% of N
4	Increased involvement of business and industry in curriculum development	1	110	51.40
13	Periodic meeting of vocational education personnel from various levels for planning articulation	2	83	38.79
1	Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions	3	73	34.11
11	Release time/in-service days for participation in articulation planning	3	73	34.11
6	Development of better labor market data for program planning	4	72	33.64
15	Development of statewide standardized course/program objectives and competencies for secondary and postsecondary	5	64	29.91
3	Identification of the occupational education role for each type of institution	6	54	25.23
22	Development of a clear articulation policy by a statewide governing agency	7	53	24.77
8	Development of state guidelines for articulation agreements between institutions	8	50	23.36
5	Resolution of the issue of credit transfer between institutions	9	46	21.50

Table 20 Continued

Factor		Counselors (N=44) Rank	Frequency	% of N
4	Increased involvement of business and industry in curriculum development	1	24	54.55
1	Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions	2	17	38.64
6	Development of better labor market data for program planning	2	17	38.64
13	Periodic meeting of vocational education personnel from various levels for planning articulation	3	16	36.36
8	Development of state guidelines for articulation agreements between institutions	4	14	31.82
11	Release time/in-service days for participation in articulation planning	5	12	27.27
15	Development of statewide standardized course/program objectives and competencies for secondary and postsecondary	5	12	27.27
3	Identification of the occupational education role for each type of institution	6	11	25.00
7	Provision of developmental, or remedial, programs	7	10	22.73
5	Resolution of the issue of credit transfer between institutions	8	9	20.45

factor, "Provision of development, or remedial, programs" (ranked seventh), to its listing.

Non-Respondent Survey

Since the response rate on the General Survey was less than desired, a non-respondent follow-up was conducted to determine the similarity between respondent and non-respondent populations. Another area of interest was the similarity among private, public, and non-respondent populations. Difficulties in testing the hypothesis that the populations were not significantly different were encountered because of the large number of factors. Chi-square would have been the only appropriate hypothesis test for use with frequencies, but the combination of a large number of factors and small N's of several subgroups surveyed resulted in a large number of cells with frequencies less than 5. Therefore, the factors were simply ranked and Spearman's rank order correlation computed (tied ranks were averaged). Correlations among the subsamples were computed separately for inhibiting factors, aiding factors, and suggestions. Since the same 43 factors could be selected by respondents as aiding or inhibiting factors, it was also possible to compute correlations between aiding and inhibiting factors, it was also possible to compute correlations between aiding and inhibiting factors for the various groups.

For the inhibiting factors, the correlation between responses of the respondent and nonrespondent samples were .9069 ($p <.001$). The correlation between respondents' and nonrespondents' rankings of the aiding factors was .8762 ($p <.001$), and, for suggestions, the correlation was .6668 ($p <.001$). While these correlations are not sufficient to show that the respondents and nonrespondent populations are identical, they are indicative of a considerable degree of agreement between the two populations. The correlations of the public and private subsamples with the respondent sample (of which they are a part) and the nonrespondent sample will not be discussed here. The correlations between the public and private subsamples are of greater interest here. For inhibiting factors, the correlation was .8088 (p <.001); for aiding factors, .7577 (p <.001); for suggestions, .7742 (p <.001). These correlations indicate a fair degree of overlap between the opinions of public and private vocational personnel but not without some independent variation within each group.

The correlation between aiding and inhibiting factors was -.5885. This indicates a fair inverse relationship; e.g., a factor rated high as an inhibiting factor tended not to be rated as high as an aiding factor. The factors seemed to be relatively distinct in regard to the respondent' classification of them as obstacles or aids to the articulation process.

Institutional Survey: Secondary Schools

Responses to the Institutional Survey: Secondary Schools include information from public and private secondary school principals. Public school respondents (N=30) represented all of the development districts in Tennessee, the greatest number being from the East Tennessee district. Twenty-five of them were administrators, three were instructors, and one was a guidance counselor. The position of one person was unknown. Nine respondents held positions in a combination high school and comprehensive vocational center; twenty-one, in high schools. Vocational courses offered by the institutions represented included agriculture, distributive education, health occupations education, home economics, office occupations, technical education, trade and industrial occupations, and special programs.

Private school respondents (N=14) to the survey were from four of the nine developmental districts in Tennessee. Eight were administrators, one was an instructor, and three were guidance counselors; the positions of two were unknown. Vocational courses offered at their high schools included distributive education, home economics, office occupations, trade and industrial occupations, and special programs. Agriculture, health occupations education, and technical education were not offered at their institutions.

The totals for all respondents (N=46), including two who did not identify with either type of institution, indicated that all developmental districts were represented, the largest number being from the East Tennessee district (13). The largest number of respondents were administrators (33), four were instructors, and four others were guidance counselors. The highest number of courses offered at all institutions was in home economics (36), followed by office occupations (29), trade and industrial occupations (21), agriculture (20), health occupations education (11), special programs (11), distributive education (10), and technical education (4).

Table 21 indicates that, concerning articulation arrangements between their schools and postsecondary schools, fewer than half of the principals stated that for their vocational courses there were postsecondary courses that offered increased occupational proficiency in the same occupational field. They cited that (1) their vocational courses were not considered to be prerequisites for postsecondary courses in the same field, (2) their students had not taken vocational courses at a postsecondary institution while still enrolled in high school, and (3) completion of any of the vocational courses did not result in "advanced placement" or "credit" at the postsecondary institution, either public or private (subsequent figures reveal that only a few secondary schools have arrangements with public postsecondary institutions).

Respondents stated that career counseling is included in the responsibilities of the schools' guidance counselors and that in public schools both guidance counselors and teachers are thoroughly aware of available post-

Table 21

Responses by Public Secondary School Principals and Private Secondary School Principals to the Institutional Survey: Secondary Schools

	All Secondary Schools (N=46)				Public Secondary Schools (N=30)•				Private Secondary Schools (N=14)•			
	Yes	No	Insufficient Information	No Response	Yes	No	Insufficient Information	No Response	Yes	No	Insufficient Information	No Response
1. The following questions should be answered according to your experience with and knowledge of articulation arrangements between your school and postsecondary schools.												
(a) For any of your vocational courses, are there postsecondary courses which offer increased occupational proficiency in the same occupational field?	19	22	4	1	11	17	2	0	8	4	2	0
(b) Are any of your vocational courses considered prerequisites for postsecondary courses in the same field?	4	38	2	2	4	24	1	1	0	13	1	0
(c) Does completion of any of your vocational courses result in "advanced placement" or "credit" at the postsecondary level?	2	37	5	2	2	23	4	1	0	13	1	0
(d) Have any of your students ever taken vocational courses at a postsecondary institution while still enrolled in high school?	3	39	1	3	2	27	0	0	1	11	1	1
(e) Does your school have "advanced placement" or "credit" arrangements with any postsecondary institution?	0	43	1	2	0	29	0	1	0	13	1	0
(f) Does your school have advanced placement and/or credit arrangements with the following institutions in Tennessee?												
Public												
Comprehensive Vocational Center	2	35		9	2	22		6	0	13		1
State Area Vocational Center	3	33		10	3	21		6	0	11		3
State Technical Institute	0	33		13	0	22		8	0	11		3
Community College	0	33		13	0	22		8	0	11		3
College or University	2	32		12	1	22		7	1	10		3
Private												
Vocational Technical School	0	32	0	14	0	20	0	10	0	12	0	2
Junior College	0	29	0	17	0	18	0	12	0	11	0	3
College or University	0	29	0	17	0	18	0	12	0	11	0	3
Proprietary School	0	28	0	18	0	17	0	13	0	11	0	3

Table 21 Continued

	All Secondary Schools (N=46)				Public Secondary Schools (N=30)*				Private Secondary Schools (N=14)*			
	Yes	No	Insufficient Information	No Response	Yes	No	Insufficient Information	No Response	Yes	No	Insufficient Information	No Response
2. Are there apprecticeship opportunities for any of your vocational programs?	1	41	1	3	1	26	1	2	0	14	0	0
3. Is career counseling included in the responsibilities of the guidance counselor(s) in your school?	40	3	–	3	27	2	–	1	13	0	–	1
4. Besides individual conferences with guidance counselors and teachers, does your school provide any form of career education?	24	19	–	3	14	15	–	1	10	3	–	1
5. Does your school place as much emphasis on postsecondary vocational education as on college education?	24	19	–	3	20	9	–	1	3	10	–	1
6. Are the guidance counselors thoroughly aware of postsecondary vocational training available?	33	9	–	4	26	2	–	2	6	7	–	1
7. Are the vocational teachers thoroughly aware of postsecondary vocational training available?	31	8	–	7	25	2	–	3	5	6	–	3
8. Please place a check beside any activities in which your school or staff has participated in the last two years.												
Staff development workshops with postsecondary vocational education personnel	13	–	–	–	11	–	–	–	2	–	–	–
Sharing facilities and staff with other secondary vocational programs	13	–	–	–	13	–	–	–	0	–	–	–
Sharing facilities and staff with postsecondary vocational programs	4	–	–	–	4	–	–	–	0	–	–	–
Working with postsecondary vocational education personnel to develop the following:												
Course objectives and competencies	8	–	–	–	7	–	–	–	1	–	–	–
Sequential vocational education curriculum	5	–	–	–	4	–	–	–	1	–	–	–
Competency tests	1	–	–	–	1	–	–	–	0	–	–	–
Meeting with postsecondary vocational education personnel to plan articulation of secondary and postsecondary vocational education programs	8	–	–	–	8	–	–	–	0	–	–	–
Contracting with outside schools or agencies that provide specialized vocational training which your school cannot provide	6	–	–	–	6	–	–	–	0	–	–	–
Visitation programs with postsecondary institutions offering vocational education	16	–	–	–	14	–	–	–	2	–	–	–

* Two respondents not included because of no identification by school type

secondary vocational training. Most private schools provide some form of career education besides individual conferences, and most public schools place as much emphasis on postsecondary vocational education as on college education. Only one school reported that there is an apprenticeship opportunity for any of the vocational programs.

Only a few schools reported articulation activities in which they had participated in the past two years, and most of them were public institutions. Some schools reported that staff developments workshops had been held with postsecondary vocational education personnel. They worked with this group to develop course objectives and competencies, sequential vocational education curriculum, and competency tests. The same number shared facilities and staff with other secondary vocational programs, but fewer shared them with postsecondary vocational programs. Some met with postsecondary vocational education personnel to plan the articulation of secondary and postsecondary vocational education programs, and some conducted visitation programs with postsecondary institutions offering vocational education. A few schools contracted with outside schools or agencies that provided specialized training that their schools could not provide.

Institutional Survey: Postsecondary Schools

Respondents from public institutions (N=20) to the Institutional Survey: Postsecondary Schools represented all but one of the development districts in the state of Tennessee. Twenty-three were administrators; one was an instructor; five, guidance counselors. Nineteen were from state area vocational technical schools; seven, from state community colleges; and three, from state technical institutes. Vocational courses offered by the institutions included agriculture, distributive education, health occupations education, home economics, office occupations, technical education, trade and industrial occupations, and special programs.

Private institution respondents (N=12) represented all of the Tennessee development districts except First Tennessee and Memphis Delta. Ten respondents were administrators and two were instructors. Nine proprietary schools were represented, one junior college, and two unidentified institutions. Vocational courses offered by the institutions were home economics, office occupations, and trade and industrial occupations.

The totals for all respondents (N=41) indicated that all but one develmental district in Tennessee was represented in the responses, the largest number having been from East Tennessee (9). Administrators totaled 33 of the respondents; instructors, three; and guidance counselors, five. The number of vocational courses offered by the institutions was largest in office occupations (33), which was followed by trade and industrial occupations (26), health occupations education (24), technical education (15), distributive education (9), home economics (8), special programs (7), and agriculture (4).

Table 22 includes information from directors of public area vocational technical schools, presidents of state community colleges and state technical institutes, and presidents of private (proprietary) postsecondary schools. Concerning articulation arrangements between their schools and secondary schools, most respondents indicated that their vocational programs offer increased occupational proficiency beyond the secondary level of instruction in the same field; that students receive "advanced placement" and/or "credit" because of completion of secondary vocational courses, competency testing, work experience, and military experience; and that secondary students have taken vocational courses at their institutions while still attending a high school. Most indicated that their vocational programs do not have specific

Table 22

Responses by Public Postsecondary School Administrators and Private Postsecondary School Administrators to the Institutional Survey: Postsecondary Schools

Question	All Postsecondary Schools (N=41)			Public Postsecondary Schools (N=29)			Private Postsecondary Schools (N=12)		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
1. Articulation between secondary schools and postsecondary schools.									
(a) Do any of your vocational education programs offer increased occupational proficiency beyond the secondary level of instruction in the same occupational field?	35	4	2	25	2	2	10	2	0
(b) Do any of your vocational programs have specific secondary level vocational education prerequisites in the same occupational field?	3	38	0	1	28	0	2	10	0
(c) Do students receive "advanced placement" and/or "credit" because of any of the following?	26	8	7	20	3	6	6	5	1
Completion of secondary vocational courses	15	7	4	11	6	3	4	1	1
Competency testing	18	3	5	14	3	3	4	0	2
Work experience	11	9	6	10	6	4	1	3	2
Military experience	15	6	5	13	4	3	2	2	2
(d) Have secondary students ever taken vocational courses at your institution while still attending a secondary school?	22	19	0	16	13	0	6	6	0
(e) Do you have "advanced placement" or "credit" arrangements between your institution and any secondary school?	7	34	0	6	23	0	1	11	0
(f) Does your institution have "advanced placement" and/or "credit arrangements" with the following types of institutions in Tennessee?	14	18	9	11	12	6	3	6	3
Public									
Secondary School	9	-	-	7	-	-	1	-	-
Comprehensive Vocational Center	5	-	-	2	-	-	2	-	-
State Area Vocational Technical School	11	-	-	9	-	-	2	-	-
State Technical Institute	7	-	-	6	-	-	1	-	-
Community College	7	-	-	7	-	-	0	-	-
College or University	5	-	-	5	-	-	0	-	-
Private									
Secondary School	2	-	-	2	-	-	0	-	-
Vocational Technical School	5	-	-	4	-	-	0	-	-
Junior College	7	-	-	5	-	-	1	-	-
College or University	8	-	-	5	-	-	2	-	-
Proprietary School	5	-	-	2	-	-	2	-	-

Table 22 Continued

Question	All Postsecondary Schools (N=41)			Public Postsecondary Schools (N=29)			Private Postsecondary Schools (N=12)		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
2. Are there apprecticeship opportunities for any of your vocational programs?	11	29	1	9	19	1	2	10	0
Types of arrangements.									
(1) There is an agreement between the school and the apprenticeship program that students receive advanced standing in the apprenticeship program.	3			3			0		
(2) There are apprenticeship opportunities but no agreement to give students advanced standing in the apprenticeship program.	6		2	5		1	1		
3. If a student completes secondary or postsecondary vocational education programs in another state and enrolls in your institution, is the student given credit or advanced placement based on the vocational program completed?	37	3	1	26	2	1	11	1	0
Types of arrangements.									
(1) Formal articulation arrangement	2		6	0		2	2		4
(2) Informal (students usually given credit)	29			24			5		
4. Does your institution offer a "transfer" curriculum (one designed to prepare the student for entry into a 4-year college or university)?	12	27	2	6	21	2	6	6	0
If "yes," does your institution place as much emphasis on job preparation as on transfer to the college or university?	12	0	0	6	0	0	6	0	0
5. Does your institution utilize the "career ladder" approach in any of your vocational programs (providing a curriculum which qualifies the student for a job AND further training in the occupational field)?	23	13	5	18	7	4	5	6	1
6. Institution or staff activities participated in within the last two years:									
Staff development workshop with secondary vocational education personnel	10	—	—	7	—	—	3	—	—
Sharing facilities and staff with secondary vocational programs	11	—	—	9	—	—	2	—	—
Sharing facilities and staff with other Postsecondary vocational programs	12	—	—	11	—	—	1	—	—
Working with secondary vocational education personnel to develop the following:									
Course objectives and competencies	11	—	—	9	—	—	2	—	—
Sequential vocational curriculum	7	—	—	6	—	—	1	—	—
Competency tests	6	—	—	5	—	—	1	—	—
Working with other postsecondary vocational education personnel to develop the following:									
Credit transfer policies	7	—	—	5	—	—	2	—	—
Course objectives and competencies	11	—	—	10	—	—	1	—	—
Competency tests	6	—	—	5	—	—	1	—	—
Meeting with secondary vocational education personnel to plan articulation of secondary and postsecondary vocational education programs	11	—	—	10	—	—	1	—	—

secondary level vocational education prerequisites in the same occupational field.

Most stated that their institutions do not have "advanced placement" or "credit" arrangements with secondary schools. About one-third of the institutions were indicated to have "advanced placement" or "credit" arrangements with public or private postsecondary institutions. Most institutions indicated that they give "credit" or "advanced placement" to students who complete either secondary or postsecondary vocational education programs in other states.

The respondents stated that most of their institutions do not have apprenticeship opportunities for any of their vocational programs, neither do the institutions offer a "transfer" curriculum designed to prepare the student for entry into a four-year college or university. Most institutions utilize the "career ladder" approach which provides a curriculum that qualifies the student for a job and further training in an occupational field.

About one fourth of the respondents indicated that their institutions or staff members particpated in at least one of the following activities within the last two years: (1) staff development workshop with secondary vocational education personnel; (2) sharing facilities and staff with both secondary vocational programs; (3) working with secondary staff personnel to develop course objectives and competencies; (4) working with other postsecondary vocational education personnel to develop credit transfer policies, course objectives and competencies, competency tests; and (5) meeting with secondary vocational education personnel to plan the articulation of secondary and postsecondary vocational education programs.

Postsecondary Student Survey

The student who was typical of the students who responded to the Postsecondary Student Survey (N=155) entered either a state technical institute or a state community college in the fall of 1977, was at either the middle or the end of the program in which enrolled, and was concentrating in technical education. The student last attended a public high school, but he did not take vocational courses there. If he had taken them he probably would have been pursuing the same types of courses in the postsecondary institution.

Table 23 includes information from students in area vocational technical schools, community colleges, state technical schools, and private proprietary schools. Most of the students had never transferred from one postsecondary institution to another. Those who had encountered several problems: loss of credit, change of major, and repeating courses completed elsewhere. Most who transferred were from public institutions other than state area vocational technical schools and community colleges. They received little, if any, credit by transfer. Most did not plan to transfer to a four-year institution and almost all believed their required course work was not designed for transfer to such an institution. Many thought that the main purpose of their present education was to prepare for a job and that their education would qualify them for a job and more advanced training in the same area of vocational education.

Most respondents thought that they should be awarded credit and/or advanced placement for previous course work, competency tests, and work experience, but not for military experience. No more than 30 percent in any of these categories had opportunity to receive credit; of this percentage most took advantage of the opportunities to get credit and/or advanced placement.

Most stated that they did not have to repeat courses they had had at the secondary level. Of those responding that did have to do so, most stated that they would have chosen to repeat the courses even if they had not been

Table 23

Responses by Public Postsecondary Students and Private Postsecondary Students to the Postsecondary Student Survey

Question	All Postsecondary Students (N=155)			Public Postsecondary Students (N=138)*			Private Postsecondary Students (N=13)*		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
1. Would any of your postsecondary courses have been more appropriate at the secondary level?	60	93	2	53	84	1	7	6	0
2. Would any of your secondary courses have been more appropriate at the postsecondary level?	27	124	4	26	109	3	1	12	0
3. Do you feel that the courses you took in high school prepared you for the vocational education courses you are taking at the postsecondary school?	97	58	0	86	52	0	9	4	0
4. When you were in high school, were you aware of the various vocational training programs available to you at the postsecondary level?	55	97	3	47	89	2	6	7	0
5. Do you feel that you received good guidance and counseling in high school?	81	71	3	70	66	2	9	4	0
6. Are your program requirements at the postsecondary school clear to you?	149	6	0	133	5	0	13	0	0
7. Have you received good counseling and guidance in planning your program at the postsecondary school?	129	24	2	117	19	2	10	3	0
8. Do you feel that the required courses at the postsecondary school are relevant to your needs?	132	20	3	115	20	3	13	0	0
9. At the institution in which you are presently enrolled, are you required to repeat courses which you have already had at the secondary level?	59	93	3	52	83	3	5	8	0
If "Yes," would you have chosen to repeat the courses if they had not been required?	34	25	0	31	21	0	3	2	0

Table 23 Continued

Question	All Postsecondary Students (N=155)			Public Postsecondary Students (N=138) *			Private Postsecondary Students (N=13) *		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
10. Will you voluntarily repeat any courses that you had in the secondary school at the postsecondary institution in which you are presently enrolled?	89	62	4	81	54	3	7	6	0
If "Yes," circle the reason why.									
(1) I did not study the material well enough in the secondary school.	17			16			1		
(2) The course at the secondary school was not as thorough as the same course at the Postsecondary level.	26			23			3		
(3) I took the secondary course a long time ago.	34			32			2		
(4) Other	19			16			2		
11. Are you taking postsecondary courses which have secondary prerequisites?	61	90	4	53	81	4	7	6	0
12. Do you feel you should be awarded credit and/or advanced placement because of:									
Previous course work?	77	56	22	66	52	20	11	2	0
Competency test?	71	62	22	61	56	21	9	4	0
Work experience?	77	62	16	68	56	14	8	12	1
Military experience?	57	73	25	49	66	23	7	5	1
13. Did you have the opportunity to get credit and/or advanced placement because of:									
Previous course work?	44	95	16	37	86	15	7	5	1
Competency test?	49	87	19	43	79	16	5	6	2
Work experience?	27	114	14	24	104	10	3	7	3
Military Experience?	19	114	22	17	104	17	2	7	4
If you answered "Yes" to any of the above, did you take advantage of the opportunity to get credit and/or advanced placement because of:									
Previous course work?	31	12	1	25	11	1	6	1	0
Competency test?	28	21	0	23	20	0	4	1	0
Work experience?	17	10	0	15	9	0	2	1	0
Military experience?	12	7	0	11	6	0	1	1	0

Table 23 Continued

Question	All Postsecondary Students (N=155)			Public Postsecondary Students (N=138) *			Private Postsecondary Students (N=13) *		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
14. What is the main purpose of your present education? (Circle only one.)									
(1) To prepare me for further vocational training	4			4			0		
(2) To prepare me for entry into a 4-year college or university	24			23			1		
(3) To prepare me for a job	115			100			11		
(4) Other	9			8			1		
15. Would your present vocational education program qualify you for a job AND more advanced training in the same area of vocational education?	141	10	4	124	10	4	13	0	0
16. Do you plan to transfer to a 4-year college or university?	47	98	10	42	86	10	4	9	0
17. Is too much of your required course work designed for transfer to a 4-year college or university rather than for job preparation?	18	131	6	17	116	5	1	12	0
18. Have you ever transferred from one postsecondary school to another?	36	118	1	33	104	1	3	10	0
Only for students who have transferred from one postsecondary institution to another.									
19. Which curriculum transfer problems did you encounter when you transferred? Please circle the appropriate response(s) below.									
(1) Loss of credit	17			17			0		
(2) Having to repeat courses I completed at another postsecondary institution	9			9			0		
(3) Change of major	13			12			1		
(4) Admission policies different from the policies of the other institution	5			5			0		
(5) Having to take courses which did not contribute to my knowledge/skill in my concentration area	7			7			0		
(6) Other	1			1			0		

Table 23 Continued

Question	All Postsecondary Students (N=155)			Public Postsecondary Students (N=138)*			Private Postsecondary Students (N=13)*		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
20. What do you feel were the causes of the transfer problems you encountered? Please circle the appropriate response(s) below.									
(1) I changed my major	13			12			1		
(2) I did not plan my program well enough	2			2			0		
(3) I received inadequate counseling	2			2			0		
(4) I could not get the courses I needed (scheduling difficulties)	2			2			0		
(5) The course titles and course descriptions were either vague or inaccurate	2			2			0		
(6) Other	7			7			0		
21. Type of postsecondary institution which you attended before you transferred.									
(11) State Area Voc Tech	1			1			0		
(13) Community College	3			3			0		
(14) Other public	15			14			1		
(21) Private Voc Tech School	2			2			0		
(22) Proprietary School	1			0			1		
(23) Junior College	1			1			0		
(24) Other Private School	3			2			1		
22. Approximate fraction of courses which transferred.									
(0) None	21			19			0		
(1) 1/4	6			6			0		
(2) 1/2	2			2			0		
(3) 3/4	3			3			0		
(4) Nearly all	4			3			1		

* Four respondents are not included because of no identification by school type.

required to do so. Most stated that they would voluntarily repeat courses they had in the secondary school at the postsecondary institution in which they were presently engaged, mainly because they had taken secondary courses several years previous to enrolling in the postsecondary institution and because the same courses in the secondary schools were not as thorough as those at the postsecondary level. Students did not feel that courses taken at one level (either secondary or postsecondary) would have been more appropriate at the other level. Most stated that high school courses prepared them for those taken at the postsecondary level, though most postsecondary courses did not have secondary prerequisites.

The majority of the students, when in high school, were unaware of various vocational training programs available to them on the postsecondary level. A bare majority thought that they had adequate guidance and counseling in high school. On the postsecondary level, program requirements were clear to almost all of the respondents, verified by the fact that almost the same number received good guidance in planning their postsecondary programs. Almost an equal number felt that the required courses at this level were relevant to their needs.

Survey of Vocational Programs

The instrument, Survey of Vocational Programs, was administered to personnel in Comprehensive Employment and Training Act (CETA) programs, correctional institutions' programs, and apprenticeship programs. Data gathered are presented in three parts, each with a tabular presentation.

CETA

Respondents in CETA programs (N=25) included administrators (7), instructors (17), and one counselor. Each represented one or more of the eight program areas involved in the study: agriculture (1), distributive education

(2), health occupations education (2), home economics (1), office occupations (9), technical education (2), trade and industrial occupations (11), special programs (4), and others not in the above listing (2). Types of programs members of the group were involved in included study release (2), GED (8), and vocational-technical (25). Five served on committees related to their assignments: three on vocational education advisory committees, two on manpower advisory councils.

Table 24 records the answers of CETA personnel to questions in the survey. In answering "How are students placed in your program?" they stated most often that students began at the same level in their programs. Next often, they stated that students took a placement examination. Less often, students were placed according to the assessment of their competencies by some other means. Other, but unmentioned, methods also ranked high. Respondents indicated most often that students should be placed in programs through a placement examination and cited other placement methods less often.

Most personnel stated that vocational programs did not require a high school education or its equivalent, nor did many have any vocational or non-vocational prerequisites that the students would have gained outside their programs, such as previous vocational course work or certain numbers of years of English. Respondents who stated that prerequisites were required did not favor their elimination; those answering that prerequisites were not required did not favor their addition. Most agreed that neither vocational nor non-vocational prerequisites be added to the curriculum. Most revealed that their courses did have prerequisites within their programs.

In most instances students were not required to take courses they had already had elsewhere, and almost all indicated that their institutions did not offer courses and services that could be better provided elsewhere. Most

Table 24

Responses by Personnel (N=25) in Comprehensive Employment and Training Act (CETA) Programs to the Survey of Vocational Programs

Question	Yes	No	No Response
1. How are students placed in your program?			
(01) All students begin at the same level in our program.	8	-	-
(02) Students take a placement examination.	7	-	-
(03) Students are placed according to the amount of prior vocational training they have received.	3	-	-
(04) Students are placed according to the amount of prior education (not vocational education) they have received.	4	-	-
(05) Students are placed according to the amount of work experience they have had.	2	-	-
(06) Students are placed according to the assessment of their competencies by some means other than the above.	8	-	-
(07) Other	7	-	-
2. Which of the following means of placement should be implemented in your program?			
(01) All students begin at the same level in our program.	0	-	-
(02) Students take a placement examination.	5	-	-
(03) Students are placed according to the amount of prior vocational training they have received.	0	-	-
(04) Students are placed according to the amount of prior education (not vocational education) they have received.	2	-	-
(05) Students are placed according to the amount of work experience they have had.	1	-	-
(06) Students are placed according to the assessment of their competencies by some means other than the above.	2	-	-

Table 24 Continued

Question	Yes	No	No Response
3. Do any of your vocational programs require a high school education or the equivalent?	5	17	3
If "yes," should that requirement be eliminated?	0	5	0
If "no," should such a requirement be added?	2	9	6
4. Do your vocational programs/courses have any vocational prerequisites which the student would have gained outside your programs (such as previous vocational course work, work experience)?	2	22	1
If "yes," should any of them be eliminated?	0	2	0
5. Should any vocational prerequisites be added?	6	17	2
6. Do your vocational programs/courses have any non-vocational prerequisites which the student would have gained outside your program (e.g., a certain number of years of English or Math)?	7	18	0
If "yes," should any of these be eliminated?	0	7	0
7. Should any non-vocational prerequisites be added?	7	16	2
8. Do any of your vocational courses have prerequisites within your program?	14	10	1
9. Are any of your students required to take any courses which they have already had elsewhere?	8	17	0
10. Do you involve employers in planning your curriculum?	20	5	0

Table 24 Continued

Question	Yes	No	No Response
11. Do you collect labor market information for use in planning your vocational program and in counseling your students?	23	2	0
12. Is there evidence of duplication of course offerings and services between your program and others (i.e., do you offer courses and services which could be better provided elsewhere)?	3	22	0
13. Do you prepare any students for further vocational training outside your program?	13	12	0
14. Does any course work and/or competency gained in your program transfer to any of the following institutions or programs (excluding your own)?	15	6	4
high schools	3	4	8
state area vocational technical schools	10	2	3
state technical institutes	6	3	6
community colleges	4	3	8
junior colleges	4	3	8
proprietary schools	1	4	10
apprenticeship programs	9	1	5
CETA programs	11	0	4
correctional education programs	4	3	8
other	1	3	11
15. Do you offer career counseling for your students?	20	5	0
16. Do you offer placement services for your students?	20	4	1
If "yes," what percentage of your students were employed in 1977?	73.92		8

Table 24 Continued

Question	Yes	No	No Response
17. Do you favor the establishment of standardized course/ program objectives for each occupational area at a statewide level?	14	10	1
18. Do you favor the development of statewide competency examinations for each occupational area?	11	11	3
19. Do you favor the establishment of state guidelines for articulation agreements among vocational education programs?	16	17	2
20. Circle any of the following activities in which your program has been engaged within the last two years:			
(1) Contracting with outside educational programs to provide educational services for your students	6	-	-
(2) Contracting with business and industry to provide educational services for your students	6	-	-
(3) Paying students who enroll in your program	16	-	-
Working with other agencies or educational programs to develop the following:			
(4) Course objectives and competencies	11	-	-
(5) Sequential vocational curriculum	2	-	-
(6) Competency tests	3	-	-
(7) Credit transfer policies	1	-	-

course work and or competencies gained in their programs transferred to other institutions or programs, primarily to other CETA programs, state area vocational technical schools, apprecticeship programs, and state technical institutes. A majority of the programs were means for preparing students for further vocational training outside the respondents' programs.

In most of the programs employers were involved in planning the curriculum, and program personnel collected labor market information for use in planning their vocational programs and in counseling students. Career counseling and placement services had been offered in almost all programs, the percentage of students employed in 1977 being an average of 73.92 percent per program.

Respondents favored the establishment of standardized course/program objectives for each occupational area at a statewide level, were evenly divided on favoring the development of statewide competency examinations for each occupational area, and did not favor the establishment of state guidelines for articulation agreements among vocational education programs.

A majority of the programs contracted with business and industry within the past two years to provide educational services for their students, but the majority did not contract either with outside educational agencies or business and industry to provide educational services for their students. Several programs engaged with other agencies or educational programs to develop course objectives and competencies, but very few were involved with them in developing sequential vocational curriculum, competency tests, and credit transfer policies.

Correctional Institutions

Respondents in programs in correctional institutions (N=24) included administrators (5), instructors (18), and one counselor. Each represented one or more of four of the eight program areas involved in the study: office occupations (1), technical education (4), trade and industrial occupations (10), and special programs (4); nine indicated programs other than these but not the areas of agriculture, distributive education, health occupations education, and home economics. Some of the members of this group were involved in one or more of the following programs offered by their institutions: study release (4), GED (11), vocational technical (22), and college preparatory (5). Two served on vocational education advisory committees; one, on a manpower advisory council.

Table 25 records the answers of personnel in programs in correctional institutions to the questions in the survey. They stated most often that students were placed in their programs according to the amount of non-vocational education they had received and through placement examinations, less often according to the amount of prior vocational training they had received and to the amount of work experience they had had. Of the means of placement mentioned that should be implemented in their programs, they specified placement examination and the employment of means other than those listed as suggestions.

Most personnel stated that vocational programs did require a high school education or its equivalent and that the programs did not require any vocational or non-vocational prerequisites that the students would have gained outside the programs. Respondents who stated that prerequisites were required did not favor their elimination; those answering that prerequisites were not required did not favor their addition. Most agreed that neither vocational nor non-vocational prerequisites should be added to the curriculum, while having revealed that their courses did have prerequistes within their programs.

In most instances students were not required to take courses they had

Table 25

Responses by Personnel (N=24) in Programs in Correction Institutions to the Survey of Vocational Programs

Question	Yes	No	No Response
1. How are students placed in your program?			
(01) All students begin at the same level in our program.	3	-	-
(02) Students take a placement examination.	9	-	-
(03) Students are placed according to the amount of prior vocational training they have received.	6	-	-
(04) Students are placed according to the amount of prior education (not vocational education) they have received.	10	-	-
(05) Students are placed according to the amount of work experience they have had.	6	-	-
(06) Students are placed according to the assessment of their competencies by some means other than the above.	4	-	-
(07) Other	2	-	-
2. Which of the following means of placement should be implemented in your program?			
(01) All students begin at the same level in our program.	1	-	-
(02) Students take a placement examination.	3	-	-
(03) Students are placed according to the amount of prior vocational training they have received.	2	-	-
(04) Students are placed according to the amount of prior education (not vocational education) they have received.	0	-	-
(05) Students are placed according to the amount of work experience they have had.	0	-	-
(06) Students are placed according to the assessment of their competencies by some means other than the above.	3	-	-

Table 25 Continued

Question	Yes	No	No Response
3. Do any of your vocational programs require a high school education or the equivalent?	11	8	5
If "yes," should that requirement be eliminated?	0	11	0
If "no," should such a requirement be added?	2	3	3
4. Do your vocational programs/courses have any vocational prerequisites which the student would have gained outside your programs (such as previous vocational course work, work experience)?	8	10	6
If "yes," should any of them be eliminated?	0	7	1
5. Should any vocational prerequisites be added?	3	13	8
6. Do your vocational programs/courses have any non-vocational prerequisites which the student would have gained outside your program (e.g., a certain number of years of English or Math)?	7	12	5
If "yes," should any of these be eliminated?	0	7	0
7. Should any non-vocational prerequisites be added?	4	13	7
8. Do any of your vocational courses have prerequisites within your program?	10	6	8
9. Are any of your students required to take any courses which they have already had elsewhere?	6	14	4
10. Do you involve employers in planning your curriculum?	8	13	3

Table 25 Continued

Question	Yes	No	No Response
11. Do you collect labor market information for use in planning your vocational program and in counseling your students?	7	14	3
12. Is there evidence of duplication of course offerings and services between your program and others (i.e., do you offer courses and services which could be better provided elsewhere)?	3	18	4
13. Do you prepare any students for further vocational training outside your program?	12	7	5
14. Does any course work and/or competency gained in your program transfer to any of the following institutions or programs (excluding your own)?	16	6	4
high schools	8	1	7
state area vocational technical schools	11	1	4
state technical institutes	11	0	5
community colleges	8	1	7
junior colleges	8	1	7
proprietary schools	4	3	9
apprenticeship programs	8	2	6
CETA programs	6	3	7
correctional education programs	10	2	4
other	2	1	13
15. Do you offer career counseling for your students?	11	9	4
16. Do you offer placement services for your students?	7	16	1
If "yes," what percentage of your students were employed in 1977?	73.82		1

Table 25 Continued

Question	Yes	No	No Response
17. Do you favor the establishment of standardized course/ program objectives for each occupational area at a statewide level?	12	8	4
18. Do you favor the development of statewide competency examinations for each occupational area?	13	8	3
19. Do you favor the establishment of state guidelines for articulation agreements among vocational education programs?	17	2	5
20. Circle any of the following activities in which your program has been engaged within the last two years:			
(1) Contracting with outside educational programs to provide educational services for your students	5	-	-
(2) Contracting with business and industry to provide educational services for your students	1	-	-
(3) Paying students who enroll in your program	10	-	-
Working with other agencies or educational programs to develop the following:			
(4) Course objectives and competencies	7	-	-
(5) Sequential vocational curriculum	2	-	-
(6) Competency tests	3	-	-
(7) Credit transfer policies	0	-	-

already had elsewhere, and almost all indicated that their institutions did not offer courses and services that could better have been provided elsewhere. Most course work and or competencies gained in their programs transferred to other institutions or programs, primarily to state area vocational technical schools, state technical institutes, other correctional education programs, and high schools, community colleges, junior colleges, and apprenticeship programs. Most of the programs were means for preparing students for further vocational training outside the respondents' programs.

In most of the programs employers were not involved in planning the curriculum, and personnel were not involved in collecting labor market information for use in planning their vocational programs and in counseling students. Career counseling was offered to students in a majority of programs but placement services were not offered in most instances. The percentage of students employed in 1977 was an average of 73.83 percent per program.

Respondents favored the establishment of standardized course/program objectives for each occupational area at a statewide level, the development of statewide competency examinations for each occupational area, and the establishment of state guidelines for articulation agreements among vocational education programs.

Some personnel stated that within the past two years students enrolled in their courses were paid, and a few stated that they had worked with other outside agencies or educational programs to develop course objectives and competencies. About one-fifth stated that their programs contracted with outside educational programs to provide educational services for their students. There were a few programs that involved business and industry in providing educational services for their students and that worked with other groups to develop sequential vocational curriculum and competency tests.

Apprenticeship Programs

Respondents in apprenticeship programs (N=17) included administrators (11), instructors (5), and one counselor. Each represented one or more of four of the eight program areas involved in the study: office occupations (1), technical education (2), trade and industrial occupations (14), and special programs (2). The areas of agriculture, distributive education, health occupations education, and home economics were not cited by the personnel. Vocational technical education was the only type of programs cited by personnel (15) that was offered under apprenticeship auspices; not offered were study release, GED, or college preparatory programs. Members of the group indicated that they served either on a vocational education advisory committee (8) or on a manpower advisory council (1).

Table 26 is a record of the responses of personnel in apprenticeship programs to the questions on the instrument. They stated most often that students placed in their programs began at the same level in the programs, less often according to the amount of work experience they had had, through taking a placement examinations, and according to the amount of prior vocational training that they had received. There was neglible response to which placement means should have been implemented in their programs.

Most personnel stated that their vocational programs did require a high school education or its equivalent and that the programs did not require any vocational or non-vocational prerequisites that the students would have gained outside the programs. Respondents who stated that prerequisites were required did not favor their elimination. Most agreed that neither vocational or non-vocational prerequisites should be added to the curriculum. Most stated that their couses did not have prerequisites within their programs.

In most instances personnel said that students were not required to take

Table 26

Responses by Personnel (N=17) in Apprenticeship Programs to the Survey of Vocational Programs

Question	Yes	No	No Response
1. How are students placed in your program?			
(01) All students begin at the same level in our program.	11	-	-
(02) Students take a placement examination.	5	-	-
(03) Students are placed according to the amount of prior vocational training they have received.	5	-	-
(04) Students are placed according to the amount of prior education (not vocational education) they have received.	2	-	-
(05) Students are placed according to the amount of work experience they have had.	6	-	-
(06) Students are placed according to the assessment of their competencies by some means other than the above.	3	-	-
(07) Other	2	-	-
2. Which of the following means of placement should be implemented in your program?			
(01) All students begin at the same level in our program.	0	-	-
(02) Students take a placement examination.	1	-	-
(03) Students are placed according to the amount of prior vocational training they have received.	1	-	-
(04) Students are placed according to the amount of prior education (not vocational education) they have received.	1	-	-
(05) Students are placed according to the amount of work experience they have had.	2	-	-
(06) Students are placed according to the assessment of their competencies by some means other than the above.	1	-	-

Table 26 Continued

Question	Yes	No	No Response
3. Do any of your vocational programs require a high school education or the equivalent?	11	4	2
If "yes," should that requirement be eliminated?	0	11	0
If "no," should such a requirement be added?	2	1	1
4. Do your vocational programs/courses have any vocational prerequisites which the student would have gained outside your programs (such as previous vocational course work, work experience)?	5	11	1
If "yes," should any of them be eliminated?	3	2	0
5. Should any vocational prerequisites be added?	4	9	4
6. Do your vocational programs/courses have any non-vocational prerequisites which the student would have gained outside your program (e.g., a certain number of years of English or Math)?	6	10	0
If "yes," should any of these be eliminated?	0	5	0
7. Should any non-vocational prerequisites be added?	4	12	1
8. Do any of your vocational courses have prerequisites within your program?	3	13	1
9. Are any of your students required to take any courses which they have already had elsewhere?	7	10	0
10. Do you involve employers in planning your curriculum?	14	3	0

Table 26 Continued

Question	Yes	No	No Response
11. Do you collect labor market information for use in planning your vocational program and in counseling your students?	11	6	0
12. Is there evidence of duplication of course offerings and services between your program and others (i.e., do you offer courses and services which could be better provided elsewhere)?	3	14	0
13. Do you prepare any students for further vocational training outside your program?	13	12	0
14. Does any course work and/or competency gained in your program transfer to any of the following institutions or programs (excluding your own)?	2	8	7
high schools	0	1	1
state area vocational technical schools	0	1	1
state technical institutes	0	1	1
community colleges	0	1	1
junior colleges	0	1	1
proprietary schools	0	1	1
apprenticeship programs	2	0	0
CETA programs	0	0	2
correctional education programs	0	1	1
other	0	1	1
15. Do you offer career counseling for your students?	8	8	1
16. Do you offer placement services for your students?	9	6	2
If "yes," what percentage of your students were employed in 1977?	92.89		

Table 26 Continued

Question	Yes	No	No Response
17. Do you favor the establishment of standardized course/program objectives for each occupational area at a statewide level?	6	10	1
18. Do you favor the development of statewide competency examinations for each occupational area?	7	9	1
19. Do you favor the establishment of state guidelines for articulation agreements among vocational education programs?	8	8	1
20. Circle any of the following activities in which your program has been engaged within the last two years:			
(1) Contracting with outside educational programs to provide educational services for your students.	5	-	-
(2) Contracting with business and industry to provide educational services for your students.	2	-	-
(3) Paying students who enroll in your program.	5	-	-
Working with other agencies or educational programs to develop the following:			
(4) Course objectives and competencies	7	-	-
(5) Sequential vocational curriculum	1	-	-
(6) Competency tests	3	-	-
(7) Credit transfer policies	2	-	-

courses they had already had elsewhere and almost all indicated that their programs did not offer courses that could have been provided elsewhere. Only course work related to CETA programs transferred. A majority of the programs were means for preparing students for further vocational training outside the respondents' programs.

In most of the programs, employers were not involved in planning the curriculum, and personnel were not involved in collecting labor market information for use in planning their vocational programs and in counseling students. Career counseling was offered in an equal number of programs, and placement services were offered in a majority of them. The percentage of students employed in 1977 was an average of 92.89 percent per program.

Respondents did not favor either the establishment of standardized course/program objectives for each occupational area at a statewide level or the development of statewide competency examinations for each occupational area. They were divided equally about favoring the establishment of state guidelines for articulation agreements among vocational education programs.

Some personnel stated that within the past two years their programs had contracted with outside educational programs to provide educational services for their students and that students who had enrolled in their programs were paid. About four-tenths stated that they had worked with other agencies or educational programs to develop course objectives and competencies. Only a few involved business and industry in providing educational services for their students and that worked with other groups to develop sequential vocational curriculum and competency tests.

Vocational Student Survey

The instrument, Vocational Student Survey, was administered to students in Comprehensive Employment and Training Act (CETA) programs, correctional institutions and apprenticeship programs. Data gathered are presented in two parts, each with a tabular presentation. Data from students in apprenticeship programs are presented even though there is a low response (11 out of 66, or 16.66 percent).

CETA

Respondents (N=44) in CETA programs stated that they were concentrating in six of the eight program areas covered by this study: health occupations education (5), home economics (1), office occupations (10), technical education (1), trade and industrial occupations (21), and special programs (5); not represented were the areas of agriculture and distributive education. Those that had ever been enrolled in a program other than CETA were few: apprenticeship programs (2), programs in a correctional institution (2). Most had last attended a public high school, and some a private business or trade school, or other type of school not identified. Most had not taken vocational education courses at this school, but, of those that had, the changes from the secondary school concentration to the concentration in CETA occurred with those enrolled in all areas except distributive education.

Table 27 records the answers of CETA students to questions in the survey. A majority of the respondents thought they could have taken courses in high school they had been taking in CETA. They felt that the courses taken in high school prepared them for the vocational courses they were taking. All but two students felt that the courses they were taking met their needs. The majority answered that they were not repeating required courses they had had either in high school or in another program, but those answering that they had said that they would repeat them even if they had not been required. Almost all stated that they were not repeating courses not required elsewhere. A majority reported that their present courses did not require previous

Table 27

Responses by Students (N=44) in Comprehensive Employment and Training Act (CETA) Programs to the Vocational Student Survey

Question	Yes	No	No Response
1. Could you have taken in high school any of the courses you are now taking?	22	21	1
2. Do you feel that the courses you took in high school prepared you for the vocational education courses you are taking now?	22	19	3
3. When you were in high school, were you aware of the various vocational training programs available to you beyond high school?	17	26	1
4. Do you feel that in high school you received effective guidance and counseling about vocational education courses?	14	28	2
5. Are you now receiving effective counseling and guidance in planning your vocational education program?	38	5	1
6. Do you feel that any of the courses you are taking do not meet your needs?	2	41	1
7. In the program in which you are presently enrolled, are you repeating required courses you have had either in high school or in some other program?	19	23	2
If "Yes," would you have repeated them if they had not been required?	15	3	1

Table 27 Continued

Question	Yes	No	No Response
8. Are you repeating a course you have had elsewhere even though it is not required that you do so?	6	32	6
If "Yes," circle the reason why.			
(1) I did not study the material well enough earlier.	0	-	-
(2) The previous course was not as thorough as the same course in the program in which I am now enrolled.	3	-	-
(3) Other	3	-	-
9. Does your present program have courses that require previous high school courses?	18	23	3
10. Do you feel you should be awarded credit and/or advanced placement because of any of the following:			
Previous course work?	10	22	12
Competency test?	12	22	10
Work experience?	12	22	10
Military experience?	8	26	10
11. Do you have opportunity to get credit and/or advanced placement in your present program because of:			
Previous course work?	15	22	7
Competency test?	4	30	10
Work experience?	15	10	9
Military experience?	12	23	9

Table 27 Continued

Question	Yes	No	No Response
If you answered "Yes" to any of the above, did you get credit and/or advanced placement in your present program because of:			
Previous course work?	3	12	0
Competency test?	0	3	1
Work experience?	0	13	2
Military experience?	2	9	1
12. What is the main purpose of your present education? (Circle only one.)			
(1) To prepare for further vocational training	1	-	-
(2) To prepare for entry into a four-year college or university	2	-	-
(3) To prepare for a job	36	-	-
(4) Other reason	2	-	-

high school courses.

Most of the students stated that when in high school they were not aware of the various vocational training programs available to them beyond high school, and most felt that in high school they did not receive effective guidance and counseling about vocational education courses. Almost all stated that in CETA programs they were receiving effective guidance and counseling in planning their vocational education programs. Almost all said that the main purpose of their education was to prepare for a job.

Most of the students did not feel that they should have received credit or advanced placement for previous course work, a competency test, work experience, or military experience. They indicated that there was no opportunity to receive credit or advanced placement in some of their present programs for previous course work, competency test, work experience, and military experience, more opportunity being for previous course work and work experience. Only a few took advantage of this type of policy.

Correctional Institutions

Students (N=54) in vocational programs in correctional institutions stated that they were involved in six of the eight program areas covered by this study: health occupations education (1), home economics (1), office occupations (5), technical education (9), trade and industrial occupations (29), and special programs (1); one did not indicate an area. Not represented were agriculture and distributive education. Those that had ever been enrolled in a program other than one in a correctional institution were in CETA (3) and apprenticeship (6) programs. Most had last attended a public high school and some an area vocational-technical school; several indicated some "Other" school. Most had not taken vocational education courses at this school, but, of those that had, the changes from the secondary concentration to the concentration in the programs in the correctional institutions occurred with those enrolled in all areas except agriculture.

Table 28 records the answers of the students to questions in the survey. A majority of them stated that they could not have taken courses in high school that they were taking in correctional institutions, but they felt that the courses that they took in high school did prepare them for the vocational courses they were taking. Most felt that the courses they was taking met their needs. Most answered that they were not repeating required courses that they had had either in high school or in another program, but those answering that they had said that they would have repeated them even if they had not been required. Most stated that they were not repeating courses completed elsewhere and not required in their programs. A majority reported that their present programs had courses that required previous high school courses.

Most of the students stated that when in high school they were aware of the various vocational training programs available to them beyond high school, and most felt that in high school they did not receive effective guidance and counseling about vocational education courses. Almost all stated that in apprenticeship programs they were receiving effective guidance and counseling in planning their vocational education programs and that the main purpose of their education was to prepare for a job.

Most of the students did not feel that they should have received credit or advanced placement for previous course work or a competency test; however, a majority wanted credit for work experience or military experience. They also indicated that there was no opportunity to receive credit or advanced placement in some of their present programs for previous course work, competency test, work experience, and military experience, more opportunity being for

Table 28

Responses by Students (N=54) in Programs in Correctional Institutions to the Vocational Student Survey

Question	Yes	No	No Response
1. Could you have taken in high school any of the courses you are now taking?	24	30	0
2. Do you feel that the courses you took in high school prepared you for the vocational education courses you are taking now?	29	25	0
3. When you were in high school, were you aware of the various vocational training programs available to you beyond high school?	32	22	0
4. Do you feel that in high school you received effective guidance and counseling about vocational education courses?	15	39	0
5. Are you now receiving effective counseling and guidance in planning your vocational education program?	45	9	0
6. Do you feel that any of the courses you are taking do not meet your needs?	14	39	1
7. In the program in which you are presently enrolled, are you repeating required courses you have had either in high school or in some other program?	15	37	2
If "Yes," would you have repeated them if they had not been required?	9	5	1

Table 28 Continued

Question	Yes	No	No Response
8. Are you repeating a course you have had elsewhere even though it is not required that you do so?	11	39	4
If "Yes," circle the reason why.			
(1) I did not study the material well enough earlier.	2	-	-
(2) The previous course was not as thorough as the same course in the program in which I am now enrolled.	4	-	-
(3) Other	5	-	-
9. Does your present program have courses that require previous high school courses?	29	21	4
10. Do you feel you should be awarded credit and/or advanced placement because of any of the following:			
Previous course work?	11	23	20
Competency test?	11	23	20
Work experience?	21	20	13
Military experience?	11	23	20
11. Do you have opportunity to get credit and/or advanced placement in your present program because of:			
Previous course work?	16	27	11
Competency test?	14	23	17
Work experience?	15	25	14
Military experience?	7	26	21

Table 28 Continued

Question	Yes	No	No Response
If you answered "Yes" to any of the above, did you get credit and/or advanced placement in your present program because of:			
Previous course work?	7	8	1
Competency test?	5	7	2
Work experience?	7	7	1
Military experience?	1	5	1
12. What is the main purpose of your present education? (Circle only one.)			
(1) To prepare for further vocational training	4	-	-
(2) To prepare for entry into a four-year college or university	2	-	-
(3) To prepare for a job	38	-	-
(4) Other reason	3	-	-

previous course work and work experience. Of those having the opportunity, the majority did not take advantage of it.

Apprenticeship Programs

Apprentices (N=11) responding to the Vocational Student Survey stated that they were involved in only two of the program areas involved in the study: trade and industrial occupations (10) and special programs (1). Not mentioned were agriculture, distributive education, health occupations education, home economics, office occupations, and technical education. Only one person had been enrolled in a vocational program (CETA) other than the one in which he was enrolled. The last kind of institution attended by respondents was either a public high school (4) or an "Other" undesignated kind of school.

Table 29 records the answers of apprentices to questions in the survey. A majority of the respondents thought they could not have taken courses in high school they had been taking in their apprenticeship programs, but they felt that the courses taken in high school had prepared them for the vocational courses they were taking. All but two students felt that the courses they were taking did not meet their needs. All but one answered that they were not repeating required courses they had had either in high school or in another program and that they were not repeating courses that they had had elsewhere even though they were not required in their programs. A majority reported that their present programs had courses that required previous high school courses.

Most of the students stated that when in high school they were not aware of the various vocational training programs available to them beyond high school, and most felt that in high school they did not receive effective guidance and counseling about vocational education courses. Almost all

Table 29

Responses by Students (N=11) in Apprenticeship Programs to Vocational Student Survey

Question	Yes	No	No Response
1. Could you have taken in high school any of the courses you are now taking?	4	7	0
2. Do you feel that the courses you took in high school prepared you for the vocational education courses you are taking now?	7	4	0
3. When you were in high school, were you aware of the various vocational training programs available to you beyond high school?	2	9	0
4. Do you feel that in high school you received effective guidance and counseling about vocational education courses?	2	9	0
5. Are you now receiving effective counseling and guidance in planning your vocational education program?	9	2	0
6. Do you feel that any of the courses you are taking do not meet your needs?	2	9	0
7. In the program in which you are presently enrolled, are you repeating required courses you have had either in high school or in some other program?	1	10	0
If "Yes," would you have repeated them if they had not been required?	0	1	0

Table 29 Continued

Question	Yes	No	No Response
8. Are you repeating a course you have had elsewhere even though it is not required that you do so?	1	10	0
If "Yes," circle the reason why.			
(1) I did not study the material well enough earlier.	0	-	-
(2) The previous course was not as thorough as the same course in the program in which I am now enrolled.	1	-	-
(3) Other	0	-	-
9. Does your present program have courses that require previous high school courses?	7	3	1
10. Do you feel you should be awarded credit and/or advanced placement because of any of the following:			
Previous course work?	1	6	4
Competency test?	2	6	3
Work experience?	5	4	2
Military experience?	2	6	3
11. Do you have opportunity to get credit and/or advanced placement in your present program because of:			
Previous course work?	3	6	2
Competency test?	2	7	2
Work experience?	6	5	0
Military experience?	0	8	3

Table 29 Continued

Question	Yes	No	No Response
If you answered "Yes" to any of the above, did you get credit and/or advanced placement in your present program because of:			
Previous course work?	1	1	1
Competency test?	1	1	0
Work experience?	3	3	0
Military experience?	0	0	0
12. What is the main purpose of your present education? (Circle only one.)			
(1) To prepare for further vocational training	0	-	-
(2) To prepare for entry into a four-year college or university	0	-	-
(3) To prepare for a job	9	-	-
(4) Other reason	1	-	-

stated that in apprenticeship programs they were receiving effective guidance and counseling in planning their vocational education programs. Almost all said that the main purpose of their education was to prepare for a job.

Most of the students felt that they should not have received credit or advanced placement for previous course work, a competency test, or military experience. They did want it for work experience, however. They indicated that there was no opportunity to receive credit or advanced placement in their present programs for previous course work, a competency test, or military experience, but there was opportunity for credit for work experience. Only a few took advantage of this type of policy.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The data gathered through the six instruments lend themselves to several conclusions relating to elements essential to the articulation process: (1) guidance and counseling; (2) formal articulation agreements between institutions; (3) standardized course and program objectives; (4) awarding credit for competency, previous course work, work experience, and military experience; (5) employer involvement in curriculum planning; (6) the role of the State Department of Education.

Guidance and Counseling

Two conclusions are evident concerning the effectiveness of guidance and counseling in secondary schools, postsecondary institutions, and programs offering vocational education: (1) students in postsecondary institutions, CETA programs, correctional institutions' programs, and apprenticeship programs felt that they had received effective guidance in planning their vocational programs; and (2) the same students felt that they had not received effective guidance while they were in high school. Students' responses concerning high school counseling differed among and within the various student populations sampled. For example, the question on the Postsecondary Student Survey and the Survey of Vocational Students concerning students' awareness in high school of vocational programs that were available at the postsecondary level was intended to indicate at least indirectly how well guidance personnel were providing information to students. The discrepancy within student groups between responses on the effectiveness of high school counseling and responses on their awareness of other vocational programs indicated that students did not equate their awareness of vocational programs with guidance and counseling. The literature was clear that it is the responsibility of secondary schools to inform students of opportunities in vocational education; many researchers agreed that this was within the domain of guidance services. The fact that several student groups reported their lack of awareness of postsecondary vocational programs while in secondary school implies that career education should be implemented or improved in secondary schools offering vocational education.

There can be several explanations for the discrepancy between students' evaluation of their guidance in secondary schools and their guidance in postsecondary and atypical programs. Perceptions of the quality of counseling received in high school may very likely have changed after students had left and had recognized inadequacies of which they had not been aware previously. In addition, students in postsecondary and atypical vocational programs probably had not had the opportunity to have tested the worth of their present guidance programs against the demands of a job or further training. Further study is recommended to determine the cause of the difference in students' perceptions.

In contrast to students, respondents to the General Survey expressed positive feelings about secondary school personnel involved in guidance and counseling. They recognized the concern and efforts of guidance and student service personnel on behalf of students as an aid to articulation; they felt the same way about vocational education teachers. They asserted that adequate knowledge of vocational education programs was a necessity for counseling purposes. They indicated that a shortage of guidance and student service personnel and qualified teachers was a barrier to an effective articulation process, as was inadequate training procedures.

The conflicting viewpoints make the need for recommendations for this area more evident: (1) guidance and counseling services for students in high schools should be strengthened so that students will understand more completely about postsecondary opportunities for vocational programs; (2) the number of student services personnel workers should be increased, or the roles of present staff members should be redefined to include articulation as a priority item; (3) assistance to students by individual vocational educational teachers should be continued; (4) materials relating to all vocational programs at the postsecondary level should be made available to secondary school vocational guidance counselors and teachers; (5) career counseling programs, including those in apprenticeship programs, should be strengthened; and (6) more programs should offer placement services for their graduates.

Formal Articulation Agreements Between Institutions

There is a lack of formal articulation agreements between institutions, a conclusion verified by the respondents in the General Survey, who not only cited this lack as the second most significant barrier to articulation but also suggested that agreements of this nature be established, and by respondents to the institutional surveys, who stated that formal arrangements were rare. Of 46 secondary schools, only five indicated that they had advanced placement or credit arrangements, one of the fundamental needs for effective articulation with postsecondary institutions in the state. Of 41 postsecondary institutions, only 14 indicated that they had such arrangements with secondary or other postsecondary institutions. It was clear that these figures represented a real need, not simply a perceived one.

Because of the lack of argeements, transfer of credits from one vocational program to another has been limited. An examination of the Postsecondary Student Survey revealed that, of 155 students, 36 transferred from one postsecondary institution to another. Of these, 21 reported that none of their previous course work transferred. Slightly more than half of the

CETA and correctional programs surveyed reported that courses in their programs did transfer to others, while only about 12 percent of apprenticeship programs indicated this.

Data showed that there existed among different vocational personnel a general skepticism concerning the objectives and effectiveness of programs other than their own, possibly as a result of poor communication. Many respondents cautioned against separatism, the practice of personnel advocating their own institutions and programs rather than promoting a concern for students and broader educational programs. The literature stated clearly that ineffective articulation results from segmentation of educational jurisdictions.

This situation has persisted because high school programs have not offered courses to satisfy college prerequisites and because the colleges do not demand secondary prerequisites in most instances. The rapid growth of postsecondary institutions and the continuous development of vocational programs in the state technical colleges and state community colleges might have prohibited the formulation of stronger cooperative efforts. The establishment of formal articulation agreements will facilitate transfer of credit and relief from other implied problems. Despite the causes, efforts should be made to examine students' prior educational experiences in order to avoid potential duplication and overlap.

The establishment of agreements would involve personnel from both types of institutions in joint meetings for staff development purposes and the development of sequential vocational curricula. Positive relationships would be built through activities such as workshops, regional meetings, and exhibitions. State vocational meetings and conventions would feature articulation emphases and include the distribution of articulation materials and information. Personnel would plan together the articulation process and practices involving their respective programs and visit each other's institutions to ascertain the effectiveness of the process about which agreements has been made.

Standardized Course and Program Objectives

Standardized course and program objectives have not been widely used in vocational educational programs in Tennessee, and efforts by institutions to develop objectives and competencies with other institutions have been minimal during the past two years. Only eight of 46 secondary schools had participated in an activity of this kind involving postsecondary institutions, only 11 of 41 postsecondary institutions reported similar activities with secondary schools, and only 11 of 35 CETA programs, 7 of 24 programs in correctional institutions, and 7 of 17 apprenticeship programs reported similar involvement with other agencies or educational programs. Respondents to the General Survey recognized standardized course and program objectives as being aids where they existed, as barriers where they did not exist, and as a frequent suggestion for improved articulation. A majority of respondents from CETA and correctional institutions' programs also favored the establishment of standardized course/program objectives. However, a much greater degree of cooperation among all personnel will be necessary to establish objectives on a statewide level.

Competency tests have not been widely employed in vocational educational programs in Tennessee, nor have there been many efforts of institutions to work with one another for the development of such tests: only one secondary school and six postsecondary schools stated that they had worked for this purpose with institutions at the other level. Further, atypical programs reflected a mixed attitude toward even the desirability of statewide competency tests, and there was only minor involvement in their helping to develop objectives. In order for competency tests to be valid, the expectations of both levels of vocational education should be taken into account; therefore, it seems essential that secondary and postsecondary personnel collaborate for this purpose.

Awarding Credit for Competency, Previous Course Work, Work Experience, and Military Experience

Students were awarded credit for competency, previous course work, work experience, and military experience only on a very limited basis. The evidence showed that most felt that they should have been awarded credit or advanced placement for ability and experience upon entrance into vocational education programs but were not. If they had, such practices would have been in keeping with what has been viewed in the literature as acceptable and effective policy and would have verified what respondents in the General Survey stated in regard to the practices having been an aid to articuation. Students given the opportunity for the awarding of credit used it. If the opportunities had been part of an extensively utilized procedure, many more students would have advanced in their programs earlier, completed them earlier, and been in the job market earlier. Awarding credit should also lead to increased enrollments and economic savings per student for institutions.

Policy should be established that allows students to receive credit for demonstrated ability and experience, and students should be counseled more thoroughly about procedures that will ensure their obtaining credit. Lack of such a policy implies that the recently-established postsecondary institutions have become tradition-bound, having equated credit only to courses and the Carnegie unit. Establishing credit would involve the evaluation of abilities and experiences for placement purposes and advanced placement where abilities surpass course requirements. Evaluation would preclude the establishment of minimum competencies, for all kinds of experiences, based on mastery of content and skills.

Employer Involvement In Curriculum Planning

Personnel in secondary schools and postsecondary institutions urged the involvement of employers in curriculum planning and development. Failure to involve them in these tasks was considered as a barrier to articulation whereas inclusion of them was depicted as an aid to articulation. Almost one fourth of all project respondents viewed their participation as a means to improve articulation, ranking a statement about participation first on their list of suggestions. Many respondents also advocated other agency involvement to encourage articulation, but few institutions or programs indicated that they were working with anyone else in training students.

Because of the emphasis placed on this factor concerning employers, it is recommended that personnel in all vocational education areas involve persons in business and industry in curriculum matters because they are the consumers of the products of vocational education and are responsive to societal needs brought about by accelerating technological changes. Employers can furnish information about trends in employment, provide on-the-job training opportunities, and emphasize the practical aspects of occupations in lectures in classes. They can also serve on committees for advising about admission policies, curriculum content, and cost efficiencies.

The Role of the State Department of Education

Participants in the project suggested that the Tennessee State Department of Education assume a larger responsibility in effecting articulation in the state. This would be accomplished by establishing a statewide unit involving representatives of the State Department of Education, the State

Board of Regents, the Tennessee Department of Corrections, the federal government, and public and non-public (proprietary and private) schools with vocational programs. Such a unit would develop a clear articulation policy, formulate guidelines for establishing agreements between institutions, and coordinate the development of articulation between secondary and postsecondary institutions and programs. The unit would also aid in developing statewide standardized course/program objectives and competencies for all levels of instruction. The unit would be instrumental in providing periodic meetings of vocational education personnel from various levels for planning articulation and would work with public institutions in identifying an occupational education role for each. It would advise about resolving issues related to credit transfer and be a data-gathering office for developing labor market data to be used in program planning. It would create a vehicle for disseminating information about articulation problems. Figure 1 depicts this recommendation.

Some mechanisms are already in force for the accomplishment of these tasks, such as regional meetings and workshops involving vocational education personnel. If emphasis on articulation can be included in these programs, information about articulation accomplishments can be disseminated to key people who will be influential in changing policy to make articulation effective. Other mechanisms, such as committees or commissions, will have to be established to achieve the other tasks. Secondary schools and postsecondary institutions would be responsible for establishing policies about released time and in-service days for personnel to participate in effecting articulation. Officials in the State Department of Education already have the legal basis for establishing an agency to establish articulation processes. What is lacking is the allocation of personnel, and their time, to the tasks of creating the agency and beginning its operation.

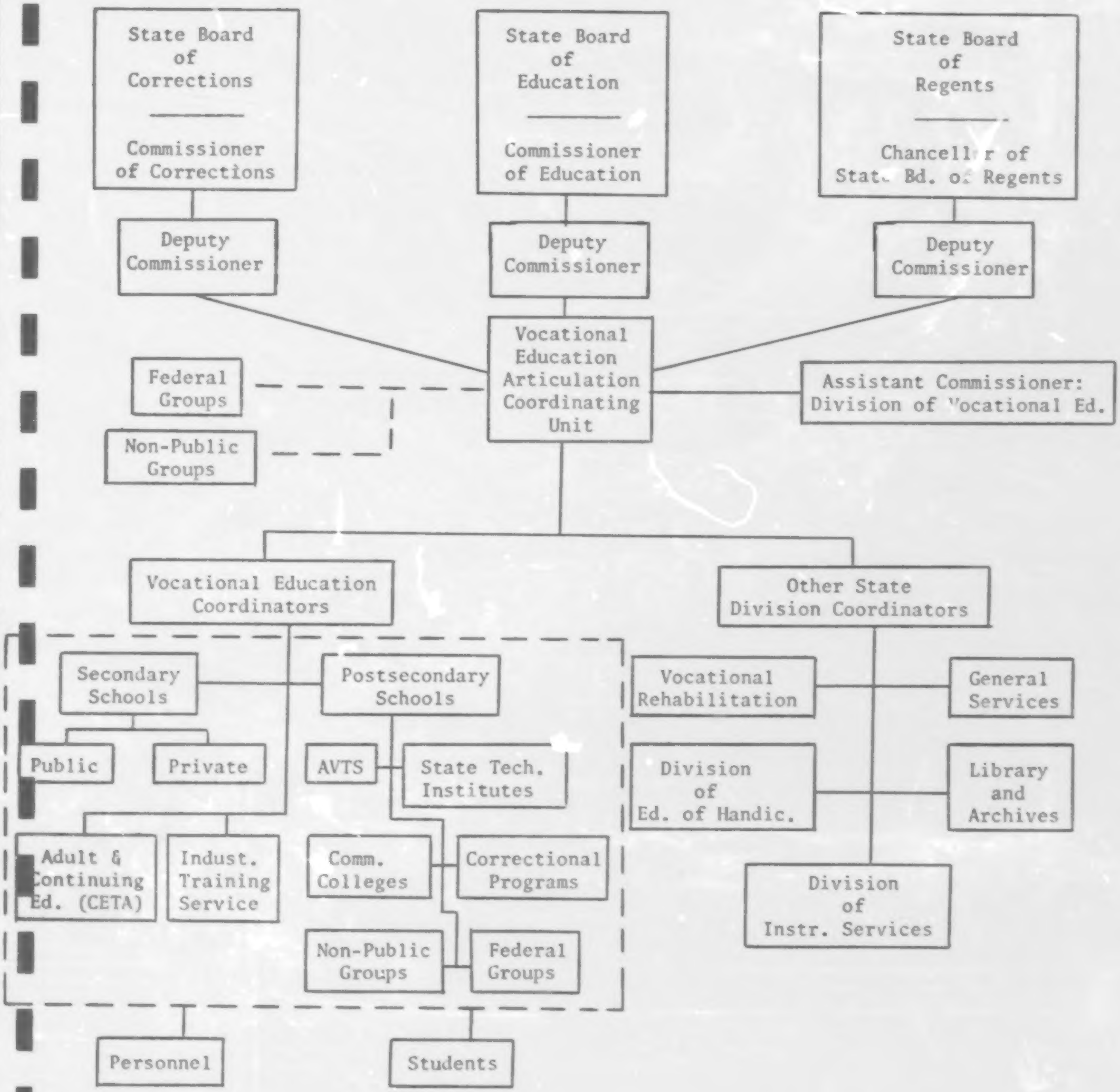
State Board of Corrections
Commissioner of Corrections
State Board of Education
Commissioner of Education
State Board of Regents
Chancellor of State Bd. of Regents
Deputy Commissioner
Deputy Commissioner
Deputy Commissioner
Vocational Education Articulation Coordinating Unit
Federal Groups
Non-Public Groups
Assistant Commissioner: Division of Vocational Ed.
Vocational Education Coordinators
Other State Division Coordinators
Secondary Schools
Postsecondary Schools
Public
Private
AVTS
State Tech. Institutes
Adult & Continuing Ed. (CETA)
Indust. Training Service
Comm. Colleges
Correctional Programs
Non-Public Groups
Federal Groups
Vocational Rehabilitation
General Services
Division of Ed. of Handic.
Library and Archives
Division of Instr. Services
Personnel
Students

Figure 1
Tennessee Vocational Education Articulation Coordinating Unit:
Theoretical Organization Chart

There is an evidenced need for the creation and development of a formal articulation process within the Tennessee State Board for Vocational Education, Division of Vocational Education. That need can best be fulfilled by the establishment of articulation policies at the Division level and by the implementation of these policies through using a communication network throughout all levels and sectors of vocational education within the state.

A major difficulty in the attainment of this broad goal is that the sphere of vocational education in Tennessee exists within a diverse network of functions and institutional purposes and there are no clear lines of communication, either vertically or horizontally, among the constituent parts of the network. The roles of the Division, then, are seen principally to be (1) the developer of uniform guidelines for articulation, (2) the disseminator of the guidelines as a suggestion to each of the subsectors of the system, (3) the influencer of implementation of suggested programs, and (4) the evaluator of program accomplishments.

While the study is interpreted as a clear mandate to the Division of Vocational Education to proceed with measures to improve articulation, it also points out the lack of communication extant among the entities to be harmonized in the articulation process. Therefore, the following schematic has as its consistent formulation emphasis a communicative flow that is both circular and perpetual. The Reciprocal Structure Theory, Figure 2, depicts the relationships and interactive elements for effective communication.

Schematic

The following descriptive outline represents the flow of the development of an effective program of vocational education articulation. Figure 3, following, is the diagramatic representation of the same flow. The schematic is generalizable to all states and addresses the need for planning for articulation.

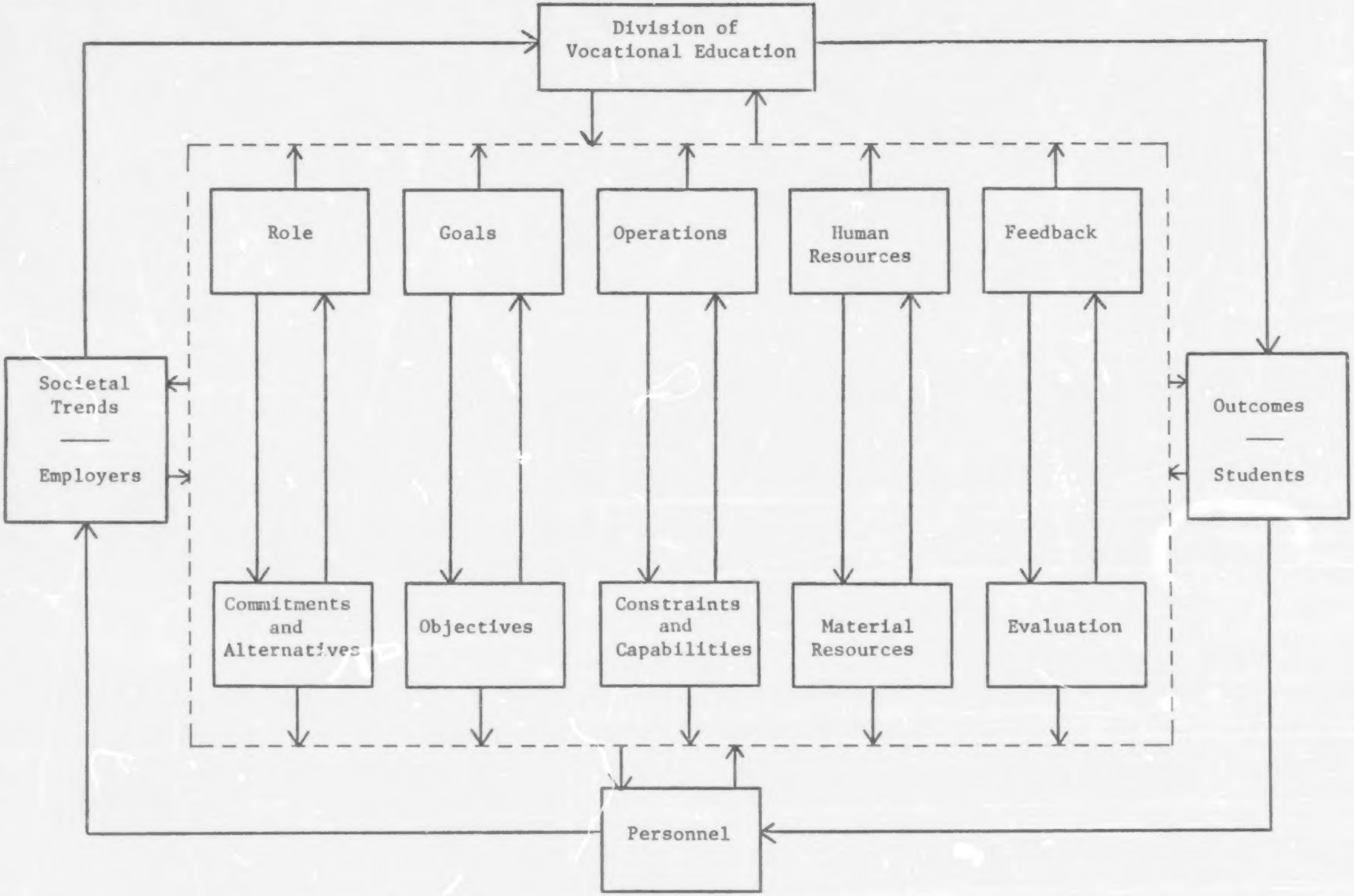
Division of Vocational Education
Role
Goals
Operations
Human Resources
Feedback
Societal Trends
Employers
Outcomes
Students
Commitments and Alternatives
Objectives
Constraints and Capabilities
Material Resources
Evaluation
Personnel

Figure 2
Reciprocal Structure Theory: Tennessee Vocational Education Articulation Project

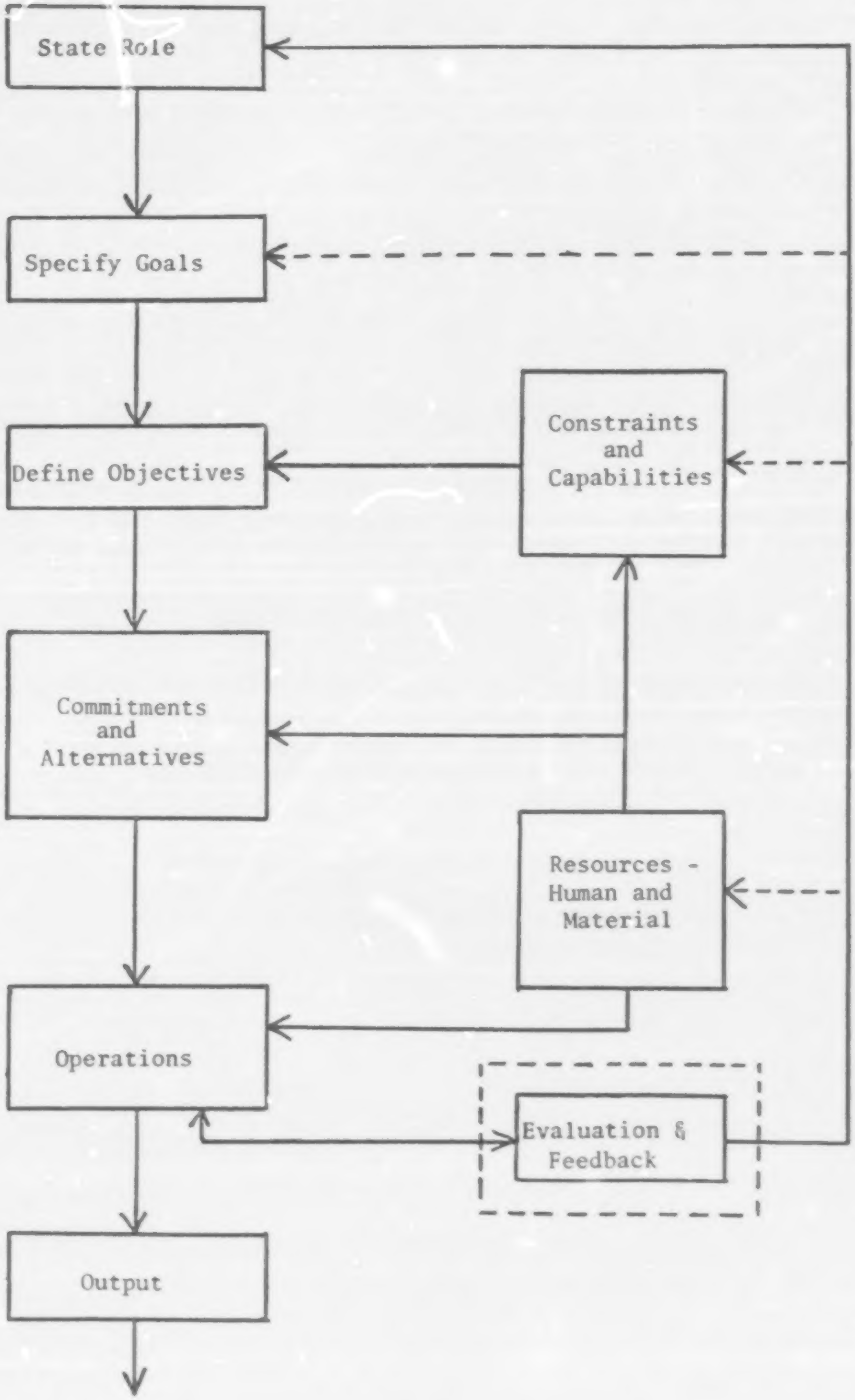
State Role
Specify Goals
Define Objectives
Constraints and Capabilities
Commitments and Alternatives
Resources - Human and Material
Operations
Evaluation & Feedback
Output

Figure 3
Schematic Flow Diagram
Tennessee Vocational Education Articulation Project

I. State Role

Define the problem. State the goals to be reached. Specify functions to be performed. Develop guidelines for effective communications.

A. Assist and enable effective management.

B. Develop resources, both human and material, and provide for their allocation to appropriate tasks.

C. Compile meaningful, timely, information for decision making, and have that information readily available.

D. Design effective input/output reciprocal modes to communications within and between all subsystems.

E. Fufill other requirements for information, such as reports, input to application subsystems, accounting, record-keeping, and various other operational needs.

II. Specify Goals

Describe desired outcomes in terms that will serve as criteria for evaluation of articulation.

III. Define Objectives

Define objectives in terms that permit analysis and movement.

A. Establish criteria of success to be used in evaluation of project.

B. Define desired outcomes in practical terms.

C. Provide for handling exceptions and special cases.

D. Determine subsystems of basic articulation processes so that they are integrated and flexible enough to meet demands of all objectives.

IV. Identify limitations and potentialities within which program will operate both in the present and future.

A. Determine staffing needs and availabilities.

B. Prescribe and assess availability of needed physical facilities and production equipment.

C. Establish funding paramenters and cost/effectiveness relationships.

D. Identify and assess external influences.

E. Assess practicalities and potentialities of both intra- and enter-communicative modes.

V. Committments and Alternatives

Consider all feasible ways of attaining objectives.

A. Survey present systems and analyze components for use in model articulation process. Also, assess program adaptability within present system.

B. Choose mechanical procedures and determine use of automated data processing.

C. Compare merits of human vs machine utilization.

D. Schedule orientation and implementation of articulation one subsystem at a time.

E. Select most advantageous cost/effectiveness alternative.

F. State system promises for improved outcomes

1. Communications
2. Processing capabilities
3. Management information
4. Decision-making potential

G. Assess program conformity with Divisional and Departmental policies.

VI. Resources - Human

Assess needs. Determine availability of resources. Develop funding capabilities. Develop training program and recruitment procedures. Establish priorities.

VII. Resources - Material

Determine probable need. Establish budget priorities. Define usage. Develop sources. Schedule production.

VIII. Operations

Develop plans with details. Implement on trail basis.

A. Assign staff and delegate responsibilities.

B. Delineate schedules, materials, staff housing, and support.

C. Conduct trial test of program.

D. Evaluate trial test and suggest modifications where necessary.

IX. Evaluation and Feedback

Both effective evaluation and effective feedback are necessary to the success of the program.

A. Evaluation procedures compare effectiveness of actual outcomes

1. Cost/effectiveness

2. Performance/risk

3. Policy conformance

4. System promises

B. Feedback is necessary so that needed modifications can be known.

C. Both should be a continual process.

X. Output

Same as objectives.

APPENDIX A

SURVEY INSTRUMENTS

Table 30

Sample and Response Summaries By Instrument

Description	N	Sample n	Response	Response % of n
GENERAL SURVEY				
Administrators[1]	489	145	62	42.8
Counselors	610	107	54	50.5
Instructors	5,035	603	225	37.3
Total	6,234	855	341	40.0
INSTITUTIONAL SURVEY				
Secondary	413	67	44	65.7
Postsecondary	189	92	41	44.6
Total	602	159	85	53.5
POSTSECONDARY STUDENT SURVEY	34,013	346	151	43.6
SURVEY OF VOCATIONAL PROGRAMS				
CETA Programs				
Administrators	5	5	7[2]	140.0
Counselors	2	2	1	50.0
Instructors	75	23	17	73.9
Total	82	30	25	83.3
Correctional Institutions				
Administrators	7	7	5	71.4
Counselors	5	5	1	20.0
Instructors	48	18	18	100.0
Total	60	30	29	96.7
Apprenticeship Programs				
Administrators	-[3]	19	11	57.9
Counselors	-	1	1	100.0
Instructors	-	18	5	27.9
Total	349	38	17	44.7
Total Survey of Vocational Programs	491	98	71	72.5
VOCATIONAL STUDENTY SURVEY				
CETA Programs	669	67	44	65.7
Correctional Institutions	519	55	54	98.2
Apprenticeship Programs	6,570	66	11	16.6
Total	7,758	188	109	58.0
GRAND TOTAL	49,458	1,645	752	45.7

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[1] Includes State Department Vocational Personnel and Local Chairpersons

[2] Seven (7) respondents identified themselves as administrators when only five were sampled.

[3] In a substantial number of programs the director is also the instructor. Therefore, the study samples the 38 total programs as if one-half were represented by administrators and one-half were represented by instructors.

TENNESSEE VOC-ED ARTICULATION

GENERAL SURVEY

Please read carefully before completing the survey.

For our purposes, ARTICULATION means the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of the instruction and allows the students to move with continuity and without hindrance through levels of the educational process.

1. Please return the survey packet blank if you have already responded to a General Survey.
2. In responding to the items on the survey, base your answers on your own experience with the vocational education programs with which you are presently involved. Do not attempt to generalize or speculate about the conditions of other programs.
3. Items 1 through 6 are to be completed by all respondents.
4. If there are any questions concerning the survey, call Dr. John Petry at the following number: 901/454-2362.
5. Please mail the response card separately when you mail the completed survey.

Thank you for your cooperation.

Survey # ______
1-4

DEMOGRAPHIC DATA SHEET: GENERAL SURVEY

The following information is necessary for correct analysis of the data to be received from this survey. Please give the information requested.

GENERAL INFORMATION (Please circle your responses.)

Program area(s) with which you are involved:

5 (01) Agriculture
7 (04) Distributive Education
9 (07) Health Occupations Education
11 (09) Home Economics
(14) Office Occupations 13
(16) Technical Education 15
(17) Trade and Industrial Occupations 17
(99) Special Programs 19

Development District:

21 (1) East Tennessee
(2) First Tennessee
(3) Memphis Delta
(4) Mid-Cumberland
(5) Northwest Tennessee
(6) South Central
(7) Southeast Tennessee
(8) Southwest Tennessee
(9) Upper Cumberland

County ______________________________

22 POSITION IN VOCATIONAL EDUCATION (Please circle your responses.)

Secondary:

(1) Administrator
(2) Instructor
(3) Guidance Counselor

Postsecondary:

(4) Administrator
(5) Instructor
(6) Guidance Counselor

State Department of Education:

(7) Nashville Office
(8) District Office

Please circle any committee of which you are a member.

23 (1) Vocational education advisory committee
24 (2) School program committee
25 (3) District program council

NAME OF INSTITUTION ______________________________

26 TYPE OF INSTITUTION (Please circle your response.)

Public:

(11) High School and Comprehensive Vocational Center
(12) Secondary School (High School)
(20) Postsecondary Institution
    (21) State Area Vocational Technical School
    (22) State Technical Institute
    (23) Community College
    (24) Other (please specify) ______________________

Private:

(32) Secondary School (High School)
(40) Postsecondary Institution
    (41) Vocational Technical School
    (42) Proprietary School
    (43) Junior College
    (44) Other (please specify) ______________________

TENNESSEE VOC-ED ARTICULATION: General Survey
FY 1978

1. The following is designed to reveal existing practices which affect the articulation process.

From your experience with the articulation process, choose the four factors which have most inhibited the articulation process; then choose the four factors which have most aided the articulation process. Place the numbers of these factors in the appropriate blanks. There are 43 factors from which to choose on this and the following page.

	Factors Which Inhibit	Factors Which Aid	
	______	______	
28-35	______	______	36-43
	______	______	
	______	______	

(01) Other agency involvement to encourage articulation (example: working closely with CETA or a manpower advisory council to avoid duplication)

(02) Lack of involvement of other agencies (CETA, manpower advisory council)

(03) Staff development workshops - separate secondary and postsecondary

(04) Staff development workshops - joint secondary and postsecondary

(05) Faculty load

(06) Shortage of qualified teachers

(07) Concern and efforts of individual teachers

(08) Shortage of guidance and student service personnel

(09) Inadequate training procedures for guidance and student service personnel

(10) Concern and efforts of guidance and student service personnel

(11) Involvement of employers in curriculum planning

(12) Failure to involve employers in curriculum planning

(13) Statewide standardized course/program objectives

(14) Lack of standardized statewide course/program objectives

(15) Formal articulation agreements between institutions within the state

(16) Lack of formal articulation agreements between institutions within the state

(17) Joint control of secondary and postsecondary institutions

(18) Separate control of secondary and postsecondary institutions

(19) Separatism tendency on part of vocational education personnel to be concerned primarily with their own institutions and programs rather than the students and a broader vocational education program

(20) Awarding of advanced placement or credit based on one or more of the following: (Check choice(s) below.)

_____ Competencies (1)
_____ Previous course work (2)
_____ Military experience (3)
_____ Work experience (4) 44-48
_____ Other (please specify) (5) ________________________________

____

(21) Lack of advanced placement or credit arrangements based on one or more of the following: (Check choice(s) below.)

_____ Competencies(1) _____ Previous course work(2) 49-53

_____ Military experience(3) _____ Work experience(4)

_____ Other (please specify) (5)____

____

(22) Duplication of course offerings (due to problems in jurisdictional concerns and/or admission policies)

(23) Use of separate facilities and staff by different institutions

(24) Sharing of facilities and staff among institutions of the same level

(25) Sharing of facilities and staff among secondary and postsecondary programs

(26) Single local advisory committee common to both secondary and postsecondary for each content area

(27) Lack of single local advisory committee common to both secondary and postsecondary for each content area

(28) Secondary/postsecondary joint development of competency examinations

(29) Lack of secondary/postsecondary joint development of competency examinations

(30) Lack of competency based or skill measurement criteria for recognition of proficiencies for occupational education

(31) Separate secondary and postsecondary curriculum at the local level

(32) Secondary/postsecondary cooperative approach to developing sequential curriculum at the local level

(33) Lack of secondary/postsecondary cooperative approach to developing curriculum at the local level

(34) State level forums for discussing, sharing concerns, and resolving problems

(35) Lack of state level forums for discussing, sharing concerns, and resolving problems

(36) Absence of clear articulation policy by a statewide governing agency

(37) Lack of leadership of the State Department of Education

(38) Leadership of the State Department of Education

(39) Adequate knowledge of related vocational education programs

(40) Lack of knowledge of related vocational education programs

(41) Regional/local advisory councils on vocational education

(42) State Advisory Council on Vocational Education

(43) Contracting with external institutions and agencies which can best provide specialized training

2. List any factors not mentioned above which you feel aid the articulation process in Tennessee.

____

____

____

3. List any factors not mentioned above which you feel inhibit the articulation process in Tennessee.

____

____

____

4. Choose from the following list the suggestions which you feel would be most effective in improving the articulation process in Tennessee. Place the numbers of these five factors in the blanks to the right.

_____ 54-63
_____
_____
_____
_____

(01) Establishment of a statewide coordinating committee specifically to coordinate development of program articulation between secondary and postsecondary institutions

(02) Secondary/postsecondary joint development of individualized instruction packages

(03) Identification of the occupational education role for each type of institution

(04) Increased involvement of business and industry in curriculum development

(05) Resolution of the issue of credit transfer between institutions

(06) Development of better labor market data for program planning

(07) Provision of developmental, or remedial, programs

(08) Development of state guidelines for articulation agreements between institutions

(09) Statewide acceptance of secondary credits in postsecondary institutions where course work is similar

(10) Simultaneous enrollment of students in two or more institutions offering different curricula

(11) Release time/in-service days for participation in articulation planning

(12) State legislation requiring study of the problem and implementation of solutions

(13) Periodic meeting of vocational education personnel from various levels for planning articulation

(14) Single local advisory committee common to both secondary and postsecondary for each content area

(15) Development of statewide standardized course/program objectives and competencies for secondary and postsecondary

(16) Secondary/postsecondary joint development of competency examinations

(17) Secondary/postsecondary joint development of statewide guidelines for awarding of advanced placement or credit based on one or more of the following (check choice(s) below):

_____ Competencies (1) _____ Work experience (2) 64-68

_____ Previous course work (3) _____ Military experience (4)

Other (please specify) (5) ______________________________________

____

(18) Joint secondary/postsecondary staff development workshops

(19) Joint control of secondary and postsecondary institutions

(20) Involvement with other agencies such as CETA or manpower advisory councils to encourage articulation

(21) Secondary/postsecondary cooperative approach to developing curriculum

(22) Development of a clear articulation policy by a statewide governing agency

(23) Improved leadership at the state level

5. List any other suggestions you have for the improvement of the articulation process in Tennessee.

6. If you have a local coordinating council such as MAVTBCC, circle the term which best describes its effectiveness in planning the articulation process between secondary and postsecondary institutions in your region. (This question does not refer to advisory councils.) 69

Very effective	Somewhat effective	Somewhat ineffective	Very ineffective	Insufficient information	No such council
4	3	2	1	0	0

Don't forget to mail the response card separately when you mail the completed survey.

Thank you for your cooperation.

TENNESSEE VOC-ED ARTICULATION

INSTITUTIONAL SURVEY

SECONDARY SCHOOLS

Please read carefully before completing the survey.

> For our purposes, ARTICULATION means the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process.

1. Please return the survey packet blank if you have already responded to a Secondary School Survey.
2. In responding to the items on the survey, base your answers on the vocational education programs with which your institution is presently involved. Do not attempt to generalize or speculate about the conditions of programs in other institutions.
3. Identify the programs in your institution by OE Code numbers only.* Refer to the enclosed OE Code List for the OE Code numbers to be used in completing the survey.
4. If there are any questions concerning the survey, call Dr. John Petry at the following number: 901/454-2362.
5. Please mail the response card separately when you mail the completed survey.

Thank you for your cooperation.

* even if your institution does not use OE Code numbers.

Survey # ____
1-4

DEMOGRAPHIC DATA SHEET

INSTITUTIONAL SURVEY: SECONDARY SCHOOLS

The following information is necessary for correct analysis of the data to be received from this survey. Please give the information requested.

GENERAL INFORMATION

Development District (Please circle your response.)

5
(1) East Tennessee
(2) First Tennessee
(3) Memphis Delta
(4) Mid-Cumberland
(5) Northwest Tennessee
(6) South Central
(7) Southeast Tennessee
(8) Southwest Tennessee
(9) Upper Cumberland

County ____________________

POSITION IN VOCATIONAL EDUCATION (Please circle your response.)

6
(1) Administrator
(2) Instructor
(3) Guidance Counselor

TYPE OF INSTITUTION (Please circle your response.)

Public:

8
(11) High School and Comprehensive Vocational Center
(12) Secondary School (High School)

Private:

(32) Private Secondary School (High School)

COURSES OFFERED AT YOUR INSTITUTION (Please check your response(s).)
(Please refer to OE Code list to determine appropriate categories.)

24
____(01) Agriculture
____(04) Distributive Education
____(07) Health Occupations Education
____(09) Home Economics
____(14) Office Occupations
____(16) Technical Education
____(17) Trade and Industrial Occupations
____(99) Special Programs

TENNESSEE VOC-ED ARTICULATION

Institutional Survey: Secondary Schools

1. The following questions should be answered according to your experience with and knowledge of articulation arrangements between your school and postsecondary schools. Respond by placing a check in the appropriate column to the right of each question. If you answer "Yes" to any of the following questions, please list by OE Code the appropriate programs.

Yes No Insufficient Information

(a) For any of your vocational courses, are there postsecondary courses which offer increased occupational proficiency in the same occupational field? ___ ___ ___ 25

If "Yes," please list by OE Code:

______ ______ ______ ______

______ ______ ______ ______

______ ______ ______ ______

______ ______ ______ ______

(b) Are any of your vocational courses considered prerequisites for postsecondary courses in the same field? ___ ___ ___ 26

If "Yes," please list by OE Code:

______ ______ ______ ______

______ ______ ______ ______

(c) Does completion of any of your vocational courses result in "advanced placement" or "credit" at the postsecondary level? ___ ___ ___ 27

If "Yes," please list by OE Code:

______ ______ ______ ______

______ ______ ______ ______

______ ______ ______ ______

(d) Have any of your students ever taken vocational courses at a postsecondary institution while still enrolled in high school? ___ ___ ___ 28

If "Yes," please circle the types of credit these students receive(d) and list the programs involved by OE Code:

29 (1) secondary credits

______ ______ ______ ______

30 (2) postsecondary credits

______ ______ ______ ______

31 (3) credit toward a postsecondary AA degree or certification

______ ______ ______ ______

32 (4) advanced placement in a postsecondary AA degree or certification program

______ ______ ______ ______

	Yes	No	Insufficient Information	
(e) Does your school have "advanced placement" or "credit" arrangements with any postsecondary institution?	____	____	____	33

If "Yes," please circle the types of arrangements and list the programs involved by OE Code beneath each circled item.

34 (1) standardized competency-based examination

________ ________ ________ ________

35 (2) competency-based examination constructed by the postsecondary institution

________ ________ ________ ________

36 (3) certification of secondary school completion

________ ________ ________ ________

37 (4) completion of specific vocational courses

________ ________ ________ ________

38 (5) other criteria ____________________

________ ________ ________ ________

(f) Does your school have advanced placement and/or credit arrangements with the following institutions in Tennessee?

Public

	Yes	No	Insufficient Information	
Comprehensive Vocational Center	____	____	____	39
State Area Vocational Center	____	____	____	40
State Technical Institute	____	____	____	41
Community College	____	____	____	42
College or University	____	____	____	43
Other (please specify) ____________				

____

Private

	Yes	No	Insufficient Information	
Vocational Technical School	____	____	____	44
Junior College	____	____	____	45
College or University	____	____	____	46
Proprietary School	____	____	____	47
Other (please specify) ____________				

____

	Yes	No	Insufficient Information	
2. Are there apprenticeship opportunities for any of your vocational programs?	____	____	____	48

If "Yes," please circle the type(s) of arrangements that exist and list the programs involved by OE Code beneath each circled item.

49 (1) Our school has agreed with the apprenticeship program that students who have completed vocational training at our school receive advanced standing in the apprenticeship program.

________ ________ ________ ________

50 (2) There are apprenticeship opportunities but no agreement to give our students advanced standing in such programs.

________ ________ ________ ________

	Yes	No	
3. Is career counseling included in the responsibilities of the guidance counselor(s) in your school?	_____	_____	51
4. Besides individual conferences with guidance counselors and teachers, does your school provide any form of career education?	_____	_____	52
5. Does your school place as much emphasis on postsecondary vocational education as on college education?	_____	_____	53
6. Are the guidance counselors thoroughly aware of postsecondary vocational training available?	_____	_____	54
7. Are the vocational teachers thoroughly aware of postsecondary vocational training available?	_____	_____	55

8. Please place a check beside any activities in which your school or staff has participated in the last two years.

56 _____staff development workshops with postsecondary vocational education personnel

57 _____sharing facilities and staff with other secondary vocational programs

58 _____sharing facilities and staff with postsecondary vocational programs

Working with postsecondary vocational education personnel to develop the following:

59 _____ course objectives and competencies

60 _____ sequential vocational education curriculum

61 _____ competency tests

62 _____meeting with postsecondary vocational education personnel to plan articulation of secondary and postsecondary vocational education programs

63 _____contracting with outside schools or agencies that provide specialized vocational training which your school cannot provide.

64 _____visitation programs with postsecondary institutions offering vocational education

Don't forget to mail your response card separately when you mail your completed survey.

Thank you for your cooperation.

TENNESSEE VOC-ED ARTICULATION

INSTITUTIONAL SURVEY

POSTSECONDARY SCHOOLS

Please read carefully before completing the survey.

For our purposes, ARTICULATION means the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process.

1. Please return the survey packet blank if you have already responded to a Postsecondary School Survey.
2. In responding to the items on the survey, base your answers on the vocational education programs with which your institution is presently involved. Do not attempt to generalize or speculate about the conditions of programs in other institutions.
3. Identify the programs in your institution by OE Code numbers only.* Refer to the enclosed OE Code List for the OE Code numbers to be used in completing the survey.
4. If there are any questions concerning the survey, call Dr. John Petry at the following number: 901/454-2362.
5. Please mail the response card separately when you mail the completed survey.

Thank you for your cooperation.

* even if your institution does not use OE Code numbers.

Survey # ________

DEMOGRAPHIC DATA SHEET

1-4

INSTITUTIONAL SURVEY: POSTSCONDARY SCHOOLS

The following information is necessary for correct analysis of the data to be received from this survey. Please give the information requested.

GENERAL INFORMATION

Development District (Please circle your response.)

5 (1) East Tennessee
(2) First Tennessee
(3) Memphis Delta
(4) Mid-Cumberland
(5) Northwest Tennessee
(6) South Central
(7) Southeast Tennessee
(8) Southwest Tennessee
(9) Upper Cumberland

County ____

POSITION IN VOCATIONAL EDUCATION (Please circle your response.)

6 (4) Administrator
(5) Instructor
(6) Guidance Counselor

TYPE OF INSTITUTION (Please circle your response.)

Public:

-8 (21) State Area Vocational Technical School
(22) State Technical Institute
(23) Community College
(24) Other (please specify) ______________________________

Private:

-10 (41) Vocational Technical School
(42) Proprietary School
(43) Junior College
(44) Other (please specify) ______________________________

COURSES OFFERED AT YOUR INSTITUTION (Please check your response(s).)
(Please refer to OE Code List to determine appropriate categories.)

-26 _____(01) Agriculture
_____(04) Distributive Education
_____(07) Health Occupations Education
_____(09) Home Economics
_____(14) Office Occupations
_____(16) Technical Education
_____(17) Trade & Industrial Occupations
_____(99) Special Programs

TENNESSEE VOC-ED ARTICULATION

Institutional Survey: Postsecondary Schools

1. The following questions should be answered according to your experience with and knowledge of articulation between your school and secondary schools and other postsecondary schools. Respond by placing a check in the appropriate column to the right of each question. If you answer "Yes" to any of the following questions, please list by OE Code the appropriate programs.

	Yes	No	
(a) Do any of your vocational education programs offer increased occupational proficiency beyond the secondary level of instruction in the same occupational field?	____	____	27

If "Yes," please list by OE Code:

_______ _______ _______ _______

_______ _______ _______ _______

_______ _______ _______ _______

	Yes	No	
(b) Do any of your vocational programs have specific secondary level vocational education prerequisites in the same occupational field?	____	____	28

If "Yes," please list by OE Code:

_______ _______ _______ _______

_______ _______ _______ _______

	Yes	No	
(c) Do students receive "advanced placement" and/or "credit" because of any of the following? (Please list OE Codes beneath any answered "Yes.")	____	____	29
Completion of secondary vocational courses?	____	____	30
_______ _______ _______ _______			
Competency testing?	____	____	31
_______ _______ _______ _______			
Work experience?	____	____	32
_______ _______ _______ _______			
Military experience?	____	____	33
_______ _______ _______ _______			
(d) Have secondary students ever taken vocational courses at your institution while still attending a secondary school?	____	____	34

If "Yes," please circle the types of credit these secondary students receive(d) and list the vocational programs involved by OE Code beneath each circled item.

35 (1) Secondary "credits"

_______ _______ _______ _______

36 (2) Postsecondary "credits"

_______ _______ _______ _______

37 (3) "Credit" toward a postsecondary AA degree or postsecondary certification

_______ _______ _______ _______

Yes No

38 (4) "Advanced placement" in a postsecondary AA degree or certification program

________ ________ ________ ________

(e) Do you have "advanced placement" or "credit" arrangements between your institution and any secondary school? ____ ____ 39

If "Yes," please circle the types of arrangements and list the programs involved by OE Code beneath each circled item.

40 (1) Standardized competency-based examination

________ ________ ________ ________

41 (2) Competency-based examination constructed by the postsecondary institution

________ ________ ________ ________

42 (3) Certification of secondary school completion

________ ________ ________ ________

43 (4) Completion of specific vocational courses

________ ________ ________ ________

44 (5) Other criteria ______________________________

________ ________ ________ ________

	Yes	No	
(f) Does your institution have "advanced placement" and/or "credit arrangements" with the following types of institutions in Tennessee?	____	____	45
Public			
Secondary School	____	____	46
Comprehensive Vocational Center	____	____	47
State Area Vocational Center	____	____	48
State Technical Institute	____	____	49
Community College	____	____	50
College or University	____	____	51
Other (please specify) ________________ ______________________________			
Private			
Secondary School	____	____	52
Vocational Technical School	____	____	53
Junior College	____	____	54
College or University	____	____	55
Proprietary School	____	____	56
Other (please specify) ________________ ______________________________			

Yes NO

2. Are there apprenticeship opportunities for any of your vocational programs? ____ ____ 57

If "Yes," please circle the type(s) of arrangements that exist and list the programs involved by OE Code beneath each circled item.

58 (1) There is an agreement between our school and the apprenticeship program that students who have completed vocational training at our school receive advanced standing in the apprenticeship program.

________ ________ ________ ________

59 (2) There are apprenticeship opportunities but no agreement to give our students advanced standing in such programs.

________ ________ ________ ________

3. If a student completes secondary or postsecondary vocational education programs in another state and enrolls in your institution, is the student given credit or advanced placement based on the vocational program completed? ____ ____ 60

If "Yes," please circle one of the responses below:

61 (a) Our institution has a formal agreement of articulation with institutions in other states.

62 (b) There is no formal agreement of articulation with institutions in other states; however, students usually are given credit or advanced placement.

4. Does your institution offer a "transfer" curriculum (one designed to prepare the student for entry into a 4-year college or university)? ____ ____ 63

If "Yes," does your institution place as much emphasis on job preparation as on transfer to the college or university? ____ ____ 64

5. Does your institution utilize the "career ladder" approach in any of your vocational programs (providing a curriculum which qualifies the student for a job AND further training in the occupational field)? ____ ____ 65

If "Yes," please list the programs involved by OE Code:

________ ________ ________ ________

6. Please place a check beside any activities in which your institution or staff has participated within the last two years.

66 ____staff development workshop with secondary vocational education personnel

67 ____sharing facilities and staff with secondary vocational programs

68 ____sharing facilities and staff with other postsecondary vocational programs

Working with secondary vocational education personnel to develop the following:

69 ____ course objectives and competencies

70 ____ sequential vocational curriculum

71 ____ competency tests

Working with other postsecondary vocational education personnel to develop the following:

72 ____ credit transfer policies

73 ____ course objectives and competencies

74 ____ competency tests

75 ____meeting with secondary vocational education personnel to plan articulation of secondary and postsecondary vocational education programs

TENNESSEE VOC-ED ARTICULATION

POSTSECONDARY STUDENT SURVEY

Please read carefully before completing the survey.

For our purposes, ARTICULATION means the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process.

1. Please return the survey packet blank if you have already responded to a Postsecondary Student Survey.
2. Please answer all applicable questions on the basis of your personal experience with the institutions in which you are enrolled.
3. Each section has its own instructions. Please read these carefully before answering the questions.
4. The terms below are used frequently in this survey. Please familiarize yourself with them before answering any questions. For the purposes of this survey they are defined as follows:
    (a) Secondary school or institution - any institution which offers a program leading to a high school diploma or its equivalent.
    (b) Postsecondary institution - any institution offering programs beyond the secondary level.
    (c) Prerequisite - any course or acceptable substitute (military or work experience) which is required before admission to another course.
    (d) Concentration area - the vocational area from which most of your courses were or are taken.
    (e) Competency - having sufficient skill and/or knowledge in a certain area.
    (f) Proprietary school - a privately owned and operated vocational school.
5. If there are any questions concerning the survey, call Dr. John Petry at the following number: 901/454-2362.
6. Please mail the enclosed response card separately when you mail the completed survey.

Thank you for your cooperation.

Survey # ____
1-4

POSTSECONDARY STUDENT SURVEY

DEMOGRAPHIC DATA SHEET

I. A. Name of institution you are presently attending ____________

B. Date entered (Please circle the appropriate semester and complete the year.)

5 (1) Fall
(2) Winter 197__
(3) Spring
(4) Summer

C. Type of institution you are presently attending (Circle the appropriate response below.)

	Public	Private
7	(11) State Area Vocational School	(21) Vocational Technical School
	(12) State Technical Institute	(22) Proprietary School
	(13) Community College	(23) Junior College
	(14) Other (Please specify) ____________	(24) Other (Please specify) ____________

D. Where are you in your program?

9 (1) beginning
(2) middle
(3) end

E. Concentration (Please circle the appropriate response.)

10
(01) Agriculture
(04) Distributive Education
(07) Health Occupations
(09) Home Economics
(14) Office Occupations
(16) Technical Education
(17) Trade & Industrial Occupations
(99) Other (Please specify) ____________

II. A. Name of secondary school which you last attended ____________

12 B. The last year you attended this secondary school: 19__

C. Type of secondary school which you last attended (Please circle the appropriate response.)

14 (1) High school and vocational center
(2) Public Secondary school (high school)
(3) Private high school

D. Did you take vocational education courses at this school? (Please circle the appropriate response.)

15 (1) Yes
(2) No

If "Yes," please give the following information.

Is your postsecondary area of concentration (see IE) the same as your area of concentration was in the secondary school?

16 (1) Yes
(2) No

If "No," please circle your area of concentration at the secondary school.

17
(01) Agriculture
(04) Distributive Education
(07) Health Occupations
(09) Home Economics
(14) Office Occupations
(16) Technical Education
(17) Trade & Industrial Occupations
(99) Other (Please specify) ____________

POSTSECONDARY STUDENT SURVEY

A. Please answer the following questions by checking the appropriate column.

Yes No

1. Would any of your postsecondary courses have been more appropriate at the secondary level? _____ _____ 19

2. Would any of your secondary courses have been more appropriate at the postsecondary level? _____ _____ 20

3. Do you feel that the courses you took in high school prepared you for the vocational education courses you are taking at the postsecondary school? _____ _____ 21

4. When you were in high school, were you aware of the various vocational training programs available to you at the postsecondary level? _____ _____ 22

5. Do you feel that you received good guidance and counseling in high school? _____ _____ 23

6. Are your program requirements at the postsecondary school clear to you? _____ _____ 24

7. Have you received good counseling and guidance in planning your program at the postsecondary school? _____ _____ 25

8. Do you feel that the required courses at the postsecondary school are relevant to your needs? _____ _____ 26

9. At the institution in which you are presently enrolled, are you required to repeat courses which you have already had at the secondary level? _____ _____ 27

   If "Yes," would you have chosen to repeat the courses if they had not been required? _____ _____ 28

10. Will you voluntarily repeat any courses that you had in the secondary school at the postsecondary institution in which you are presently enrolled? _____ _____ 29

    If "Yes," circle the reason why.

30 (1) I did not study the material well enough in the secondary school.
31 (2) The course at the secondary school was not as thorough as the same course at the postsecondary level.
32 (3) I took the secondary course a long time ago.
33 (4) Other (please specify)

____

____

11. Are you taking postsecondary courses which have secondary prerequisites? _____ _____ 34

12. Do you feel you should be awarded credit and/or advanced placement because of:

    Previous course work? _____ _____ 35

    Competency test? _____ _____ 36

    Work experience? _____ _____ 37

    Military experience? _____ _____ 38

13. Did you have the opportunity to get credit and/or advanced placement because of:

	Yes	No	
Previous course work?	____	____	39
Competency test?	____	____	40
Work experience?	____	____	41
Military experience?	____	____	42

If you answered "Yes" to any of the above, did you take advantage of the opportunity to get credit and/or advanced placement because of:

	Yes	No	
Previous course work?	____	____	43
Competency test?	____	____	44
Work experience?	____	____	45
Military experience?	____	____	46

14. What is the main purpose of your present education? (Circle only one.)

47 (1) To prepare me for further vocational training

(2) To prepare me for entry into a 4-year college or university

(3) To prepare me for a job

(4) Other (please specify) ____

____

	Yes	No	
15. Would your present vocational education program qualify you for a job AND more advanced training in the same area of vocational education?	____	____	48
16. Do you plan to transfer to a 4-year college or university?	____	____	49
17. Is too much of your required course work designed for transfer to a 4-year college or university rather than for job preparation?	____	____	50
18. Have you ever transferred from one postsecondary school to another?	____	____	51

If "Yes," go to section B.

If "No," go to section C.

* * *

B. Only for students who have transferred from one postsecondary institution to another. (If you have not transferred, go to Section C.)

19. Which curriculum transfer problems did you encounter when you transferred? Please circle the appropriate response(s) below.

52 (1) Loss of credit

53 (2) Having to repeat courses I completed at another postsecondary institution

54 (3) Change of major

55 (4) Admission policies different from the policies of the other institution

56 (5) Having to take courses which did not contribute to my knowledge/skill in my concentration area

57 (6) Other (please specify) ____

20. What do you feel were the causes of the transfer problems you encountered? Please circle the appropriate response(s) below.

58 (1) I changed my major.

59 (2) I did not plan my program well enough.

60 (3) I received inadequate counseling.

61 (4) I could not get the courses I needed (scheduling difficulties).

62 (5) The course titles and course descriptions were either vague or inaccurate.

63 (6) Other (please specify) ____

21. Type of postsecondary institution which you attended before you transferred. (Please enter the appropriate number from the list found in item I.C. on the Demographic Data Sheet.) _____ 64

22. Approximate fraction of courses which transferred. (circle your response)

66 (0) None (1) 1/4 (2) 1/2 (3) 3/4 (4) Nearly all

* * *

C. You have completed the survey. Please return the response card and the completed survey at your earliest convenience.

Thank you for your cooperation.

TENNESSEE VOC-ED ARTICULATION

SURVEY OF VOCATIONAL PROGRAMS

Please read carefully before completing the survey.

For our purposes, ARTICULATION means the process planned by educational personnel to facilitate the transition of students through various programs of instruction and to allow the students to move with continuity and without hindrance through levels of the educational process.

1. Please return the survey packet blank if you have already responded to this survey.
2. In responding to the items on the survey, base your answers on your own experience with the vocational education programs with which you are presently involved. Do not attempt to generalize or speculate about the conditions of other programs.
3. If there are any questions concerning the survey, call Dr. John Petry collect at the following number: 901/454-2362.
4. Please mail the response card separately when you mail the completed survey.

Thank you for your cooperation.

Survey # 166
1-4

DEMOGRAPHIC DATA SHEET: GENERAL SURVEY

The following information is necessary for correct analysis of the data to be received from this survey. Please circle your responses:

Program area(s) with which you are involved

5 (01) Agriculture
7 (04) Distributive Education
9 (07) Health Occupations Education
11 (09) Home Economics
(14) Office Occupations 13
(16) Technical Education 15
(17) Trade and Industrial Occupations 17
(99) Special Programs 19

Other (please specify)____________

____

Type of educational program in which you are involved:

21 (1) Apprenticeship
(2) CETA
(3) Correctional institution

Your role in the educational program:

22 (1) Administrator
(2) Instructor
(3) Counselor

Type(s) of programs offered:

23 (1) Study release or educational release
24 (2) GED (high school equivalency)
25 (3) Vocational - technical programs
26 (4) College preparatory

Committees of which you are a member:

27 (1) Vocational education advisory committee
28 (2) Manpower advisory council

Name of your program or organization ____

____

SURVEY OF VOCATIONAL PROGRAMS

1. How are students placed in your program? (Circle any applicable responses.)

29 (01) All students begin at the same level in our program.

30 (02) Students take a placement examination.

31 (03) Students are placed according to the amount of prior vocational training they have received.

32 (04) Students are placed according to the amount of prior education (not vocational education) they have received.

33 (05) Students are placed according to the amount of work experience they have had.

34 (06) Students are placed according to the assessment of their competencies by some means other than the above. (Please specify.) ____________________

____

35 (07) Other (Please specify.) ____________________

____

2. Using the numbers above, list any means of placement which you feel should be implemented in your program.

36-41 ____ ____ ____

____ ____ ____

	Yes	No	
3. Do any of your vocational programs require a high school education or the equivalent?	____	____	42
If "yes," should that requirement be eliminated?	____	____	43
If "no," should such a requirement be added?	____	____	44
4. Do your vocational programs/courses have any vocational prerequisites which the student would have gained outside your program (such as previous vocational course work, work experience)?	____	____	45
If "yes," should any of them be eliminated?	____	____	46
5. Should any vocational prerequisites be added?	____	____	47
6. Do your vocational programs/courses have any non-vocational prerequisites which the student would have gained outside your program (e.g., a certain number of years of English or Math)?	____	____	48
If "yes," should any of these be eliminated?	____	____	49
7. Should any non-vocational prerequisites be added?	____	____	50
8. Do any of your vocational courses have prerequisites within your program?	____	____	51
9. Are any of your students required to take any courses which they have already had elsewhere?	____	____	52
10. Do you involve employers in planning your curriculum?	____	____	53
11. Do you collect labor market information for use in planning your vocational program and in counseling your students?	____	____	54

	Yes	No	
12. Is there evidence of duplication of course offerings and services between your program and others (i.e., do you offer courses and services which could be better provided elsewhere)?	____	____	55
13. Do you prepare any students for further vocational training outside your program?	____	____	56
14. Does any course work and/or competency gained in your program transfer to any of the following institutions or programs (excluding your own)?	____	____	57
high schools	____	____	58
state area vocational technical schools	____	____	59
state technical institutes	____	____	60
community colleges	____	____	61
junior colleges	____	____	62
proprietary schools	____	____	63
apprenticeship programs	____	____	64
CETA programs	____	____	65
correctional education programs	____	____	66
other (please specify) ____________________ ____________________ ____________________	____	____	67
15. Do you offer career counseling for your students?	____	____	68
16. Do you offer placement services for your students?	____	____	69
If "yes," what percentage of your students were employed in 1977? ____________________ 70			
17. Do you favor the establishment of standardized course/program objectives for each occupational area at a statewide level?	____	____	72
18. Do you favor the development of statewide competency examinations for each occupational area?	____	____	73
19. Do you favor the establishment of state guidelines for articulation agreements among vocational education programs?	____	____	74

20. Circle any of the following activities in which your program has been engaged within the last two years:

75 (1) Contracting with outside educational programs to provide educational services for your students (please list these agencies).

____________________ ____________________

____________________ ____________________

76 (2) Contracting with business and industry to provide educational services for your students.

77 (3) Paying students who enroll in your program.

Working with other agencies or educational programs to develop the following:

78 (4) Course objectives and competencies

79 (5) Sequential vocational curriculum

80 (6) Competency tests

81 (7) Credit transfer policies (please list appropriate agencies)

____________________ ____________________

____________________ ____________________

____________________ ____________________

TENNESSEE VOC-ED ARTICULATION

VOCATIONAL STUDENT SURVEY

Please read carefully before completing the survey.

For our purposes, ARTICULATION means the planned process within the educational system which facilitates the transititon of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process.

1. Please answer all questions on the basis of your own personal experience.
2. Please read the instructions carefully before answering the questions.
3. The terms below are used frequently in this survey. Please read them before answering any questions. For the purposes of this survey they are defined as follows:
    - (a) Secondary school or institution - any institution which offers a program leading to a high school diploma or its equivalent
    - (b) Postsecondary institution - any institution offering programs beyond the secondary level
    - (c) Concentration area - the vocational area from which most of your courses were or are taken
    - (d) Competency - having sufficient skill and/or knowledge in a certain area
4. If there are any questions concerning the survey, call Dr. John Petry at the following number: 901/454-2362.
5. Please mail the enclosed response card separately when you mail the completed survey.

Thank you for your cooperation.

Survey #_____
1-4

DEMOGRAPHIC DATA SHEET

VOCATIONAL STUDENT SURVEY

1. Please circle the type of program in which you are presently enrolled.

(1) CETA
(2) Apprenticeship
(3) Correctional institution

2. Type of education you are receiving in this program. (Please circle your answer.)

(1) GED
(2) College preparatory
(3) Vocational technical
(4) Other ____________________

3. Location of program in which you are enrolled. ____________________

____

4. Area of concentration in which you are now enrolled. (Please circle your answer.)

(01) Agriculture
(04) Distributive Education
(07) Health Occupations
(09) Home Economics
(14) Office Occupations 18
(16) Technical Education 20
(17) Trade and Industrial Occupations 22
(99) Other Area (Please write it.) __________ 24

5. Were you ever in any of the following programs other than the one in which you are now enrolled? (Circle one or more that apply.)

(1) CETA
(2) Apprenticeship
(3) Correction

6. The last year you attended either a public school or a private school: 19_____ 29

7. Type of school that you last attended? (Please circle your answer.)

(1) Public high school
(2) Combination public high school and comprehensive vocational center
(3) Area vocational technical school
(4) Private high school
(5) Private business or trade school
(6) Other (Please write it.) ____________________

8. Did you take vocational education courses at this school? (Please circle your answer.)

(1) Yes
(2) No

9. If "Yes," are you now taking the same area of concentration as you did then?

If "No," circle the area of concentration in the school you attended before enrolling in the program you are now in.

(01) Agriculture
(04) Distributive Education
(07) Health Occupations
(09) Home Economics
(14) Office Occupations
(16) Technical Education
(17) Trade and Industrial Occupations
(99) Other (Please write it.) __________

TENNESSEE VOC-ED ARTICULATION

Vocational Student Survey

Please answer the following questions by checking the correct column (either "Yes" or "No"). Circle your answers when instructions indicate.

	Yes	No	
1. Could you have taken in high school any of the courses you are now taking?	___	___	35
2. Do you feel that the courses you took in high school prepared you for the vocational education courses you are taking now?	___	___	36
3. When you were in high school, were you aware of the various vocational training programs available to you beyond high school?	___	___	37
4. Do you feel that in high school you received effective guidance and counseling about vocational education courses?	___	___	38
5. Are you now receiving effective counseling and guidance in planning your vocational education program?	___	___	39
6. Do you feel that any of the courses you are taking do not meet your needs?	___	___	40
7. In the program in which you are presently enrolled, are you repeating courses you have had either in high school or in some other program?	___	___	41
If "Yes," would you have repeated them if they had not been required?	___	___	42
8. Are you repeating a course you have had elsewhere even though it is not required that you do so?	___	___	43

If "Yes," circle the reason why.

44 (1) I did not study the material well enough earlier.
45 (2) The previous course was not as thorough as the same course in the program in which I am now enrolled.
46 (3) Other (Please write the reason.) ______________________________

____

	Yes	No	
9. Does your present program have courses that require previous high school courses?	___	___	47
10. Do you feel you should be awarded credit and/or advanced placement because of any of the following:			
Previous course work?	___	___	48
Competency test?	___	___	49
Work experience?	___	___	50
Military experience?	___	___	51

11. Do you have opportunity to get credit and/or advanced placement in your present program because of:

	Yes	No	
Previous course work?	____	____	52
Competency test?	____	____	53
Work experience?	____	____	54
Military experience?	____	____	55

If you answered "Yes" to any of the above, did you get credit and/or advanced placement in your present program because of:

	Yes	No	
Previous course work?	____	____	56
Competency test?	____	____	57
Work experience?	____	____	58
Military experience?	____	____	59

12. What is the main purpose of your present education? (Circle only one.)

60 (1) To prepare for further vocational training
(2) To prepare for entry into a four-year college or university
(3) To prepare for a job
(4) Other reason (Please write it.) __________________________
____

When you complete the survey, mail it in the stamped envelope provided. Also, fill out the response card and mail it separately.

Thank you for your cooperation.

APPENDIX B

SURVEY LETTERS

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

December 12, 1977

To: Vocational Education Personnel

The articulation process among secondary and postsecondary vocational education programs is a topic of great concern to educators. Effective articulation is essential to optimum use of human and educational resources. A 1976 study by the National Advisory Council on Vocational Education indicated a nationwide lack of effective articulation processes and recommended investigations at state and local levels. Accordingly, the State Department of Education has commissioned the Bureau of Educational Research and Services of Memphis State University to examine the articulation process in Tennessee.

Your institution has been chosen to participate in the field test of a survey to be used in this study. Please see that the enclosed survey is completed by routing it through the appropriate departments. It is crucial that the information received from this survey be complete and accurate. If there is not sufficient space to answer any of the questions, finish responding on the back cover. Please label all such responses carefully.

The survey packet includes the survey itself, a response card, and a self-addressed, stamped envelope. Refer to the cover page of the survey for further instructions.

Please return the survey and your suggestions in the enclosed envelope within seven days of the receipt of this letter. We appreciate the special assistance you are able to provide in this effort to improve the vocational education articulation process in Tennessee.

Sincerely yours,

John R. Petry

John R. Petry, Director
Vocational Education Articulation
Project

An Equal Opportunity University

STATE OF TENNESSEE
DEPARTMENT OF EDUCATION
Division of Vocational-Technical Education
200 CORDELL HULL BUILDING
NASHVILLE 37219

MEMORANDUM

TO: All Vocational Education Personnel

FROM: John Leeman, Assistant Commissioner

DATE: 3/10/78

RE: Vocational Education Articulation Project

The articulation process among secondary and postsecondary vocational education programs is a topic of great concern to educators. Effective articulation is essential to optimum use of human and educational resources. A 1976 study by the National Advisory Council on Vocational Education indicated a nationwide lack of effective articulation processes and recommended investigations at state and local levels. Accordingly, the State Department of Education has commissioned the Bureau of Educational Research and Services of Memphis State University to examine the articulation process in Tennessee.

An accurate and useful study requires the involvement of all vocational education personnel. Therefore, we are asking your cooperation in completing the enclosed survey. Please return the completed survey form to the Bureau of Educational Research and Services, Memphis State University, Memphis, Tennessee 38152, within one week of the receipt of this memorandum. If you have any questions concerning the survey, please contact Dr. John Petry, Bureau of Educational Research and Services, (901) 454-2362.

We appreciate your assistance in this effort to improve the articulation process in Vocational Education in Tennessee.

JL/DW/rw

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

March 10, 1978

Dear Student:

The Tennessee State Department of Education is interested in knowing how well schools offering vocational education have coordinated their programs to help students get the most from their training. This coordination process is called articulation. The Division of Vocational Technical Education has asked the Bureau of Educational Research and Services, Memphis State University, to survey a group of students from all of the institutions beyond high school that offer vocational-technical education.

Will you aid in this task by (1) responding to the items on the instrument attached, (2) returning it in the stamped envelope within two weeks after you have received it, and (3) sending the stamped card separately.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

il

Enclosures

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

March 15, 1978

Dear :

Enclosed in the shipment attached to this letter are _ packets of material relating to the Tennessee Vocational Education Articulation Project. Each packet contains (1) a letter about the survey, (2) an instruction sheet, (3) a General Survey instrument, (4) a response card, and (5) a stamped, addressed envelope in which to return the instrument.

Our information states that you have _ faculty members, _ guidance counselors, and _ division and department chairmen involved in vocational education. To obtain their participation will you employ the following procedures:

1. Number your vocational faculty from _____ and then select _ individuals using the following random numbers: _______.

2. Choose _ vocational guidance counselors who are not faculty members.

3. Number all of your chairmen of vocational divisions and departments from ___ and select _ individuals using the following random numbers: _______.

Next, will you send a packet to each participant chosen. The recipient will then respond to the instrument and send it to the project office at Memphis State University. Also, will you send us the name, address, zip code and telephone number of each participant so that we can check each response card and mail a reminder to those not responding within two weeks after receiving the package.

If you have any questions about this part of the project, call me collect at 901-454-2362. Other material is being sent to you about an instrument for students.

Thank you for your assistance in this significant project.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

Enclosure: Letter from Commissioner Leeman

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

March 14, 1978

Dear :

Thank you for your assistance in the Tennessee Vocational Education Articulation Project. Your aid in administering the survey will enable us to have a more comprehensive view of the status of articulation in this state.

Enclosed in the shipment attached are __ packets for students in your institution. Each packet contains (1) a letter about the survey, (2) an instruction sheet, (3) an instrument, (4) a response card, and (5) a stamped, addressed envelope in which to return the instrument.

Our records indicate that your institution has an enrollment of _____ different fulltime and parttime vocational education students. Will you number their names from ______ and select individuals using the following numbers:

Next, will you mail a packet to each student selected. The student will then respond to the instrument and send it to the project office at Memphis State University. Also, will you send us the name, address, zip, and telephone numbers of each student so we can check each response card and mail a reminder to those not responding within two weeks after receiving the package.

If you have any questions about this part of the project, call me at 901/454-2362. Later, I will be sending you other instruments for faculty members, academic advisors, and administrators.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

Enclosure: Letter from Commissioner Leeman

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

April 27, 1978

Dear :

Thank you for agreeing to participate in the Tennessee Vocational Education Articulation Survey. Your reaction to the items on the attached instruments will be highly useful for determining the status of articulation in Tennessee. It has already been established that an effective articulation process increases enrollments in institutions.

Would you respond to the instrument Tennessee Voc-Ed Articulation Institutional Survey: Postsecondary Schools and mail it in the enclosed stamped envelope. Will you also mail the Response Card separately so that we will have a record of your participation.

Thank you for your involvement in this significant project.

Sincerely,

John R. Petry, Director
Tennessee Vocational
Education Articulation Project

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

April 28, 1978

Dear :

Thank you for your assistance in the Tennessee Vocational Education Articulation Project. Your aid in administering the survey will enable us to have a more comprehensive view of the status of articulation in this state.

Enclosed in the attached shipment is/are # General Survey packets. Each packet contains (1) a letter about the survey (2) the General Survey itself (3) a response card, and (4) a stamped addressed envelope in which to return the instrument.

Our records indicate that you have # chair(man/men) of vocation programs, # vocational faculty members, and # counselors. (Insertion of individual directions) They will respond to the surveys and return them to the project office at Memphis State University. Also, will you send us the names and addresses of the selected personnel so that we will be able to mail reminders to those who do not respond within two weeks.

Also enclosed is/are # Postsecondary Student Survey packets. Our records show that you have # students in vocational programs.

or

Enclosed in the attached shipment is/are # Postsecondary Student Survey packets. Our records show that you have # students in vocational programs.

(either paragraph continues)

Please number the students from 1 to # and mail survey packets to students numbered #_______________. The students will then respond to instruments and send them to the project office at Memphis State University. Also, will you send us the name, address, zip, and telephone number of each student so we can check each response card and mail a reminder to those not responding within two weeks.

If you have any questions about this part of the project, call me at 901/454-2362.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

Dear :

Thank you for sending the names of the students who are participating in the Tennessee Vocational Education Articulation Project. Their responses will be appreciated, and data from their instruments will become a part of the larger body of data gathered from throughout the state.

Your involvement has been crucial to the success of this project. Thank you for every effort expended on its behalf.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

Dear :

Thank you for sending the names of the faculty members, counselors, and division and departmental chairmen who are participating in the Tennessee Vocational Education Articulation Project. Their responses will be appreciated, and data from their instruments will become a part of the larger body of data gathered from throughout the state.

Your involvement has been crucial to the success of this project. Thank you for every effort expended on its behalf.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

May 11, 1978

re: Tennessee Voc-Ed Articulation Project
for the State Board of Education

Dear :

In order that we may properly identify responses to the subject survey, we need a list of students to whom the survey forms have been sent. This was requested when the original package was sent out, and must have been overlooked during your administration of the materials.

Please submit the requested list as soon as possible. We are nearing our study deadline with the State Board of Education, and your cooperation is necessary, if we are to meet those deadlines. Please reply by May 17, 1978. Thank you.

Sincerely,

Don MacDonald, Research Assistant
Bureau of Educational Research & Services

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

May 12, 1978

Dear Student:

We are nearing the end of a comprehensive study for the Tennessee State Department of Education designed to determine how well schools offering vocational education have coordinated their programs to help students get the most from their training. This coordination process is called articulation.

The study would not be complete without a substantial student response to the issues involved. You have been chosen as part of the student sample for this task. Please aid in this task by (1) responding to the items on the instrument attached, (2) returning it in the stamped envelope enclosed, and (3) sending the stamped card to us separately.

Please be sure to mail your reply within one week of receipt of this material. We must stress again the importance of your information to the purpose of education in Tennessee. Thank you for participating.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

Enclosures

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

May 20, 1978

Dear :

Enclosed is the General Survey we discussed on the telephone today. As we agreed in our conversation, I will call you to record your responses.

Your cooperation will help us assess the status of articulation in vocational education programs throughout Tennessee, in accordance with Commissioner Leeman's request. Thank you for you assistance.

Sincerely,

Don MacDonald, Research Assistant
Bureau of Educational Research & Services

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

May 24, 1978

Dear :

Enclosed are the survey materials we discussed on the telephone. Please complete one packet yourself, as by instructions. Other members of the random sample at your institution are

Please ask them to complete similar packets.

Each survey should be returned to us in the #10 self-addressed stamped envelope enclosed with each packet. In addition, each samplee should complete and return separately the self-addressed stamped card in his packet.

Because we have so little time in which to complete this study for the State of Tennessee Department of Education, your immediate return of the completed questionnaire would be especially appreciated. Thank you.

Sincerely,

Don MacDonald, Research Assistant
Tennessee Vocational Education
Articulation Project

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

May 25, 1978

Bureau of Educational Research and Services

Dear Friend:

Mr. Sam DiNicola, Administrative Assistant in the State of Tennessee Department of Corrections has sent me your name and address so that I can contact you about participating in a study of vocational education in Tennessee that is being conducted by Memphis State University for the Division of Vocational-Technical Education of the Tennessee State Department of Education.

We need you to help us by responding to the attached instrument, Tennessee Voc-Ed Articulation: Survey of Vocational Programs. Your participation will help to identify the status of the articulation process in Tennessee. Articulation is defined as "the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process".

Will you do the following: (1) respond to the items on the instrument, (2) return the instrument in the stamped envelope within one week after you receive it, and (3) return the stamped card separately.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

il

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

May 30, 1978

Dear Student:

The Tennessee State Department of Education is interested in knowing how well CETA, apprenticeship, and correctional institutions programs have been coordinated to help students get the most from their training. This coordination process is called "articulation." The Division of Vocational-Technical Education has asked the Bureau of Educational Research and Services, Memphis State University, to survey students to obtain this information.

Will you aid in this task by (1) responding to the items on the instrument attached, (2) returning it in the stamped envelope as soon as possible after you have received it (within four days), and (3) sending the stamped card separately.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

Enclosures

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

June 8, 1978

Dear :

Enclosed are the student survey materials for the study ordered by the Tennessee State Department of Education relative to Voc-Ed articulation.

Please supervise the distribution and collection of these materials so that a maximum return may be realized. If a student needs assistance in order to understand the material, it is permissible for you to offer such aid.

In the administration of these survey forms, please instruct the student to ignore Instruction #5 on the green sheet.

Completed forms should be packaged and returned to us in the enclosed, self-addressed, stamped, manila envelope. If you have any questions, call me at 901/454-2362, collect. Thank you for your help.

Sincerely,

Don McDonald, Research Assistant
Tennessee Voc-Ed Articulation Project

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

June 8, 1978

Dear:

Your name has been selected from a group of coordinators of apprenticeship and training programs in West Tennessee to be a participant in the Tennessee Vocational-Education Articulation Study authorized by the Tennessee State Department of Education. Mr. Joe DeMatteo, State Director of the Bureau of Apprenticeship and Training, and Mr. George Beaseley, of the Memphis Office, are supporters of this research project. In this study, articulation is defined as "the process planned by educational personnel to facilitate the transition of students through various programs of instruction and to allow the students to move with continuity and without hindrance through levels of the educational process."

Would you aid in this survey by (1) responding to the items on the instrument "Survey of Vocational Programs," (2) returning it in the stamped envelope provided, and (3) sending the stamped card separately.

I would appreciate your returning the survey as soon as possible, preferably by return mail, but no later than within a week after you have received it.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

il

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

June 9, 1978

Dear :

Your apprenticeship program has been selected for participation in the Tennessee Vocational Education Articulation Project authorized by the Tennessee State Department of Education. This phase of the project involves the apprentices in your program.

Would you aid in this survey by (1) randomly selecting one apprentice from your program and (2) mailing the enclosed packet to him as soon as possible. Because we are nearing the completion of this project, we would appreciate your immediate attention to this request.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

il

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

June 9, 1978

Dear Apprentice:

The Tennessee State Department of Education is interested in knowing how well agencies offering vocational education have coordinated their programs to help students get the most from their training. This coordination process is called articulation. The Division of Vocational Technical Education has asked the Bureau of Educational Research and Services, Memphis State University, to survey a group of students from all of the programs that offer vocational-technical education.

Will you aid in this task by (1) responding to the items on the instrument attached, (2) returning it in the stamped envelope within one week after you have received it, and (3) sending the stamped card separately. Because we are nearing the completion of the project, we would appreciate your immediate attention to this request.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

il

Enclosures

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

June 10, 1978

Dear CETA Participant:

The Tennessee State Department of Education is interested in knowing how well agencies offering vocational education have coordinated their programs to help students get the most from their training. This coordination process is called articulation. The Division of Vocational Technical Education has asked the Bureau of Educational Research and Services, Memphis State University, to survey a group of students from all of the programs that offer vocational-technical education.

You have been chosen to aid in this task. Will you please (1) respond to the items on the attached questionnaire and (2) return it to your CETA supervisor. Because we are nearing the completion of the project, we would appreciate your immediate attention to this request.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

Enclosures

An Equal Opportunity University

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

June 12, 1978

Dear :

Your CETA jurisdiction has been selected for participation in the Tennessee Vocational Education Articulation Project authorized by the Tennessee State Department of Education. This phase of the project involves the student/participant in your program(s).

Specifically, please aid in this survey by administering one of the enclosed survey(s) to one (1) student in each of the following programs under your jurisdiction, according to the latest information from the State Department. Opposite each program listed is a number representing a random selection to be applied to your records. For example, if that number is 23, then you should select student number 23 from your files. If for some reason that selection cannot be activated, proceed to the next usuable student file.

CETA Program Number	Random Selection Number

When all of your students have completed and returned the forms to you, please return them in the individual, stamped, self-addressed envelope enclosed.

Time is of the essence. If you have any questions, please call me collect at 901/454-2362. Thank you for your participation in this project.

Sincerely,

Don MacDonald, Research Assistant
Tennessee Vocational Education
Articulation Project

Enclosures

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

June 15, 1978

Dear :

Your name has been selected from a group of coordinators of apprenticeship and training programs in Tennessee to be a participant in the Tennessee Vocational-Education Articulation Study authorized by the Tennessee State Department of Education. Mr. Joe DeMatteo, State Director of the Bureau of Apprenticeship and Training, supports this research project. In this study, articulation is defined as "the process planned by educational personnel to facilitate the transition of students through various programs of instruction and to allow the students to move with continuity and without hindrance through levels of the educational process."

Would you aid in this survey by (1) responding to the items on the instrument "Survey of Vocational Programs," (2) returning it in the stamped envelope provided, and (3) sending the stamped card separetely.

I would appreciate your returning the survey as soon as possible, preferably by return mail, but no later than within a week after you have received it.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

**Bureau of Educational
Research and Services**

June 16, 1978

Dear Friend:

The Tennessee State Department of Education is interested in knowing how well agencies offering vocational education have coordinated their programs to help students get the most from their training. This coordination process is called articulation. The Division of Vocational Technical Education has asked the Bureau of Educational Research and Services, Memphis State University, to survey a group of instructors from all of the programs that offer vocational-technical education, including apprenticeship programs.

Will you aid in this task by (1) responding to the items on the instrument attached, (2) returning it in the stamped envelope with one week after you have received it, and (3) sending the stamped card separately. Because we are nearing the completion of the project, we would appreciate your immediate attention to this request.

Thank you for participating in this project. Your information is important to the purposes of education in Tennessee.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

Enclosures

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational Research and Services

June 16, 1978

Dear :

On behalf of the Tennessee State Department of Education personnel at Memphis State University are conducting a survey called the Tennessee Vocational Education Articulation Project. Mr. Joe DeMatteo, State Director of the Bureau of Apprenticeship and Training, is a supporter of this research study. For our purposes, articulation is defined as "the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process."

Would you give the packet labeled "Instructor" to an instructor in your apprenticeship program and ask him to participate in the survey. The packet contains (1) an instrument, "Survey of Vocational Programs," (2) a stamped envelope, (3) a response card, and (4) a letter about instructions.

If you are the instructor, will you respond to the survey instrument, mail it in the stamped envelope, and mail the response card separately. Please return the survey as soon as possible preferably within one week after you have received it.

Would you also give or send the packet labeled "Apprentice" to 1 of your apprentices. It contains an instrument "Student Vocational Program Survey," a stamped envelope, a response card, and a letter about the survey. Students constitute one population of the survey and their participation is necessary in order for us to know completely the status of articulation in Tennessee.

Thank you for aiding us in this survey. The information we gather from you is important to the purpose of education in Tennessee.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

June 21, 1978

Dear :

On behalf of the Tennessee State Department of Education, personnel at Memphis State University are conducting a survey called the Tennessee Vocational Education Articulation Project. Mr. Joe DeMatteo, State Director of the Bureau of Apprenticeship and Training, is a supporter of this research study. For our purposes, articulation is defined as "the planned process within the educational system which facilitates the transition of students between the secondary and postsecondary levels of instruction and allows the students to move with continuity and without hindrance through levels of the educational process."

Would you give the packet labeled "Instructor" to an instructor in your apprenticeship program and ask him to participate in the survey. The packet contains (1) an instrument, "Survey of Vocational Programs," (2) a stamped envelope, (3) a response card, and (4) a letter about instructions.

If you are the instructor, will you respond to the survey instrument, mail it in the stamped envelope, and mail the response card separately. Please return the survey as soon as possible preferably within one week after you have received it.

Would you also give or send the packet labeled "Apprentice" to 1 of your apprentices. It contains an instrument "Student Vocational Program Survey," a stamped envelope, a response card, and a letter about the survey. Students constitute one population of the survey and their participation is necessary in order for us to know completely the status of articulation in Tennessee.

Thank you for aiding us in this survey. The information we gather from you is important to the purpose of education in Tennessee.

Sincerely,

John R. Petry, Director
Tennessee Vocational Education
Articulation Project

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

Bureau of Educational
Research and Services

July 7, 1978

Dear :

We are now in the final phase of our study of vocational education articulation for the Tennessee State Department of Education. However, we are experiencing a problem relative to the closing of the data on the apprenticeship portion of the study. To wit, many of you have not as yet returned the materials requested in our previous communication.

Specifically, we sent you materials to:

1) survey your program through you as the program director;
2) distribute to certain program administrators forms for their completion and return;
3) distribute to certain instructors forms for their completion and return; and,
4) transmit to certain students forms for their completion and return.

If you have not completed one or more of the above tasks, please do so at your earliest convenience. All other groups have responded to our survey, and we are waiting only on the returns from the apprenticeship areas.

Also, regardless of whether you have completed the four tasks listed above, please address and distribute one of the enclosed reminder cards to the same person to whom you sent the orginal material. Since we have never known to whom you distributed the packets, you are our only communication with these samples.

We need your help. Please give these matters your earliest attention. If you need any further instructions, please call collect at 901/454-2362. Thank you.

Sincerely yours,

Don MacDonald, Research Assistant
Tennessee Vocational Education
Articulation Project

APPENDIX C

DATA PRESENTATION: GENERAL SURVEY

Table 31

Factors (N=43) Identified by All Respondents (N=367) to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY	PER CENT
1	5	.01362
2	31	.08447
3	17	.04632
4	17	.04632
5	81	.22071
6	71	.19346
7	34	.09264
8	114	.31063
9	76	.20708
10	28	.07629
11	12	.03270
12	84	.22888
13	6	.01635
14	75	.20436
15	7	.01907
16	92	.25068
17	8	.02180
18	29	.07902
19	90	.24523
20	4	.01090
21	31	.08447
22	38	.10354
23	10	.02725
24	2	.00545
25	1	.00272
26	4	.01090
27	33	.08992
28	5	.01362
29	38	.10354
30	63	.17166
31	10	.02725
32	3	.00817
33	42	.11444
34	6	.01635
35	56	.15259
36	85	.23161
37	30	.08174
38	2	.00545
39	5	.01362
40	58	.15804
41	0	.00000
42	0	.00000
43	2	.00545

Table 32

Factors (N=43) Identified by Public Respondents (N=336) to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF SUBSAMPLE	PER CENT OF SUBSAMPLE	PER CENT OF TOTAL F	PER CENT OF TOTAL N
1	4	.0119048	.8000000	.0108992
2	30	.0892857	.9677419	.0817438
3	16	.0476190	.9411764	.0435967
4	16	.0476190	.9411764	.0435967
5	73	.2172619	.9012346	.1989101
6	62	.1845238	.8732394	.1689373
7	31	.0922619	.9117647	.0844687
8	107	.3184524	.9385965	.2915531
9	66	.1964285	.8684210	.1798365
10	28	.0833333	1.0000000	.0762942
11	9	.0267857	.7500000	.0245232
12	73	.2172619	.8690476	.1989101
13	6	.0178571	1.0000000	.0163488
14	70	.2083333	.9333333	.1907356
15	6	.0178571	.8571428	.0163488
16	90	.2678571	.9782608	.2452316
17	8	.0238095	1.0000000	.0217984
18	26	.0773809	.8965517	.0708447
19	83	.2470238	.9222222	.2261580
20	4	.0119048	1.0000000	.0108992
21	30	.0892857	.9677419	.0817438
22	34	.1011904	.8947368	.0926430
23	9	.0267857	.9000000	.0245232
24	2	.0059524	1.0000000	.0054496
25	1	.0029762	1.0000000	.0027248
26	3	.0089286	.7500000	.0081744
27	31	.0922619	.9393939	.0844687
28	4	.0119048	.8000000	.0108992
29	35	.1041666	.9210526	.0953678
30	59	.1755952	.9365079	.1607629
31	8	.0238095	.8000000	.0217984
32	2	.0059524	.6666666	.0054496
33	39	.1160714	.9285714	.1062670
34	5	.0148810	.8333333	.0136240
35	53	.1577381	.9464285	.1444141
36	82	.2440476	.9647058	.2234332
37	28	.0833333	.9333333	.0762942
38	2	.0059524	1.0000000	.0054496
39	4	.0119048	.8000000	.0108992
40	56	.1666666	.9655172	.1525885
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	2	.0059524	1.0000000	.0054496

Table 33

Factors (N=43) Identified by Private Respondents (N=17) to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF SUBSAMPLE	PER CENT OF SUBSAMPLE	PER CENT OF TOTAL F	PER CENT OF TOTAL N
1	0	.0000000	.0000000	.0000000
2	1	.0588235	.0322581	.0027248
3	0	.0000000	.0000000	.0000000
4	0	.0000000	.0000000	.0000000
5	6	.3529412	.0740740	.0163488
6	7	.4117647	.0985915	.0190736
7	2	.1176471	.0588235	.0054496
8	4	.2352941	.0350877	.0108992
9	5	.2941176	.0657895	.0136240
10	0	.0000000	.0000000	.0000000
11	2	.1176471	.1666666	.0054496
12	8	.4705882	.0952381	.0217984
13	0	.0000000	.0000000	.0000000
14	3	.1764706	.0400000	.0081744
15	0	.0000000	.0000000	.0000000
16	1	.0588235	.0108696	.0027248
17	0	.0000000	.0000000	.0000000
18	2	.1176471	.0689655	.0054496
19	2	.1176471	.0222222	.0054496
20	0	.0000000	.0000000	.0000000
21	0	.0000000	.0000000	.0000000
22	1	.0588235	.0263158	.0027248
23	0	.0000000	.0000000	.0000000
24	0	.0000000	.0000000	.0000000
25	0	.0000000	.0000000	.0000000
26	0	.0000000	.0000000	.0000000
27	2	.1176471	.0606061	.0054496
28	0	.0000000	.0000000	.0000000
29	3	.1764706	.0789474	.0081744
30	3	.1764706	.0476190	.0081744
31	0	.0000000	.0000000	.0000000
32	0	.0000000	.0000000	.0000000
33	2	.1176471	.0476190	.0054496
34	0	.0000000	.0000000	.0000000
35	2	.1176471	.0357143	.0054496
36	1	.0588235	.0117647	.0027248
37	2	.1176471	.0666667	.0054496
38	0	.0000000	.0000000	.0000000
39	0	.0000000	.0000000	.0000000
40	1	.0588235	.0172414	.0027248
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	0	.0000000	.0000000	.0000000

Table 34

Factors (N=43) Identified by Public Secondary Personnel (N=163) Responding to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	4	.0245399	1.0000000	.0119048
2	19	.1165644	.6333333	.0565476
3	6	.0368098	.3750000	.0178571
4	6	.0368098	.3750000	.0178571
5	34	.2085889	.4657534	.1011904
6	33	.2024540	.5322580	.0982143
7	16	.0981595	.5161290	.0476190
8	72	.4417177	.6728972	.2142857
9	33	.2024540	.5000000	.0982143
10	22	.1349693	.7857143	.0654762
11	6	.0368098	.6666666	.0178571
12	41	.2515337	.5616438	.1220238
13	3	.0184049	.5000000	.0089286
14	34	.2085889	.4857143	.1011904
15	1	.0061350	.1666666	.0029762
16	32	.1963190	.3555555	.0952381
17	3	.0184049	.3750000	.0089286
18	12	.0736196	.4615384	.0357143
19	36	.2208589	.4337349	.1071428
20	1	.0061350	.2500000	.0029762
21	11	.0674846	.3666666	.0327381
22	17	.1042944	.5000000	.0505952
23	7	.0429449	.7777777	.0208333
24	2	.0122699	1.0000000	.0059524
25	0	.0000000	.0000000	.0000000
26	3	.0184049	1.0000000	.0089286
27	17	.1042944	.5483871	.0505952
28	0	.0000000	.0000000	.0000000
29	14	.0858895	.4000000	.0416667
30	24	.1472392	.4067796	.0714285
31	2	.0122699	.2500000	.0059524
32	1	.0061350	.5000000	.0029762
33	21	.1288343	.5384615	.0625000
34	2	.0122699	.4000000	.0059524
35	22	.1349693	.4150943	.0654762
36	35	.2147239	.4268292	.1041666
37	14	.0858895	.5000000	.0416667
38	1	.0061350	.5000000	.0029762
39	1	.0061350	.2500000	.0029762
40	22	.1349693	.3928571	.0654762
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	2	.0122699	1.0000000	.0059524

Table 35

Factors (N=43) Identified by Public Postsecondary Personnel (N=173) Responding to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentages of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	0	.0000000	.0000000	.0000000
2	11	.0635838	.3666666	.0327381
3	10	.0578035	.6250000	.0297619
4	10	.0578035	.6250000	.0297619
5	39	.2254335	.5342466	.1160714
6	29	.1676300	.4677419	.0863095
7	15	.0867051	.4838709	.0446429
8	35	.2023121	.3271028	.1041666
9	33	.1907514	.5000000	.0982143
10	6	.0346821	.2142857	.0178571
11	3	.0173410	.3333333	.0089286
12	32	.1849711	.4383562	.0952381
13	3	.0173410	.5000000	.0089286
14	36	.2080925	.5142857	.1071428
15	5	.0289017	.8333333	.0148810
16	58	.3352601	.6444444	.1726190
17	5	.0289017	.6250000	.0148810
18	14	.0809248	.5384615	.0416667
19	47	.2716763	.5662650	.1398809
20	3	.0173410	.7500000	.0089286
21	19	.1098266	.6333333	.0565476
22	17	.0982659	.5000000	.0505952
23	2	.0115607	.2222222	.0059524
24	0	.0000000	.0000000	.0000000
25	1	.0057803	1.0000000	.0029762
26	0	.0000000	.0000000	.0000000
27	14	.0809248	.4516129	.0416667
28	4	.0231214	1.0000000	.0119048
29	21	.1213872	.6000000	.0625000
30	35	.2023121	.5932203	.1041666
31	6	.0346821	.7500000	.0178571
32	1	.0057803	.5000000	.0029762
33	18	.1040462	.4615384	.0535714
34	3	.0173410	.6000000	.0089286
35	31	.1791907	.5849056	.0922619
36	47	.2716763	.5731707	.1398809
37	14	.0809248	.5000000	.0416667
38	1	.0057803	.5000000	.0029762
39	3	.0173410	.7500000	.0089286
40	34	.1965318	.6071428	.1011904
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	0	.0000000	.0000000	.0000000

Table 36

Factors (N=43) Identified by Public Administrators (N=65) Responding to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	0	.0000000	.0000000	.0000000
2	5	.0769231	.1666666	.0148810
3	3	.0461538	.1875000	.0089286
4	3	.0461538	.1875000	.0089286
5	9	.1384615	.1232876	.0267857
6	13	.2000000	.2096774	.0386905
7	9	.1384615	.2903225	.0267857
8	23	.3538461	.2149532	.0684524
9	15	.2307692	.2272727	.0446429
10	4	.0615385	.1428571	.0119048
11	2	.0307692	.2222222	.0059524
12	8	.1230769	.1095890	.0238095
13	1	.0153846	.1666666	.0029762
14	16	.2461538	.2285714	.0476190
15	4	.0615385	.6666666	.0119048
16	24	.3692307	.2666667	.0714285
17	3	.0461538	.3750000	.0089286
18	9	.1384615	.3461538	.0267857
19	24	.3692307	.2891566	.0714285
20	1	.0153846	.2500000	.0029762
21	5	.0769231	.1666666	.0148810
22	7	.1076923	.2058823	.0208333
23	2	.0307692	.2222222	.0059524
24	0	.0000000	.0000000	.0000000
25	0	.0000000	.0000000	.0000000
26	0	.0000000	.0000000	.0000000
27	3	.0461538	.0967742	.0089286
28	1	.0153846	.2500000	.0029762
29	3	.0461538	.0857143	.0089286
30	11	.1692308	.1864406	.0327381
31	4	.0615385	.5000000	.0119048
32	0	.0000000	.0000000	.0000000
33	9	.1384615	.2307692	.0267857
34	1	.0153846	.2000000	.0029762
35	9	.1384615	.1698113	.0267857
36	18	.2769231	.2195122	.0535714
37	2	.0307692	.0714285	.0059524
38	0	.0000000	.0000000	.0000000
39	1	.0153846	.2500000	.0029762
40	6	.0923077	.1071428	.0178571
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	0	.0000000	.0000000	.0000000

Table 37

Factors (N=43) Identified by Public Instructors (N=214) Responding to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	4	.0186916	1.0000000	.0119048
2	18	.0841121	.6000000	.0535714
3	10	.0467290	.6250000	.0297619
4	10	.0467290	.6250000	.0297619
5	58	.2710280	.7945205	.1726190
6	39	.1822430	.6290323	.1160714
7	19	.0887850	.6129032	.0565476
8	59	.2757009	.5514019	.1755952
9	48	.2242990	.7272727	.1428571
10	23	.1074766	.8214285	.0684524
11	5	.0233645	.5555555	.0148810
12	50	.2336449	.6849315	.1488095
13	2	.0093458	.3333333	.0059524
14	47	.2196261	.6714286	.1398809
15	1	.0046729	.1666666	.0029762
16	50	.2336449	.5555555	.1488095
17	5	.0233645	.6250000	.0148810
18	13	.0607477	.5000000	.0386905
19	43	.2009345	.5180722	.1279762
20	3	.0140187	.7500000	.0089286
21	22	.1028037	.7333333	.0654762
22	22	.1028037	.6470588	.0654762
23	4	.0186916	.4444444	.0119048
24	0	.0000000	.0000000	.0000000
25	1	.0046729	1.0000000	.0029762
26	3	.0140187	1.0000000	.0089286
27	17	.0794392	.5483871	.0505952
28	2	.0093458	.5000000	.0059524
29	24	.1121495	.6857142	.0714285
30	39	.1822430	.6610169	.1160714
31	2	.0093458	.2500000	.0059524
32	2	.0093458	1.0000000	.0059524
33	23	.1074766	.5897436	.0684524
34	2	.0093458	.4000000	.0059524
35	35	.1635514	.6603773	.1041666
36	58	.2710280	.7073171	.1726190
37	22	.1028037	.7857143	.0654762
38	2	.0093458	1.0000000	.0059524
39	2	.0093458	.5000000	.0059524
40	41	.1915888	.7321428	.1220238
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	2	.0093458	1.0000000	.0059524

Table 38

Factors (N=43) Identified by Public Counselors (N=44) Responding to the General Survey that Inhibit the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	0	.0000000	.0000000	.0000000
2	5	.1136363	.1666666	.0148810
3	3	.0681818	.1875000	.0089286
4	2	.0454545	.1250000	.0059524
5	5	.1136363	.0684931	.0148810
6	8	.1818181	.1290323	.0238095
7	2	.0454545	.0645161	.0059524
8	21	.4772727	.1962616	.0625000
9	3	.0681818	.0454545	.0089286
10	0	.0000000	.0000000	.0000000
11	2	.0454545	.2222222	.0059524
12	12	.2727273	.1643835	.0357143
13	1	.0227273	.1666666	.0029762
14	8	.1818181	.1142857	.0238095
15	1	.0227273	.1666666	.0029762
16	13	.2954545	.1444444	.0386905
17	0	.0000000	.0000000	.0000000
18	2	.0454545	.0769231	.0059524
19	11	.2500000	.1325301	.0327381
20	0	.0000000	.0000000	.0000000
21	3	.0681818	.1000000	.0089286
22	5	.1136363	.1470588	.0148810
23	3	.0681818	.3333333	.0089286
24	1	.0227273	.5000000	.0029762
25	0	.0000000	.0000000	.0000000
26	0	.0000000	.0000000	.0000000
27	8	.1818181	.2580645	.0238095
28	0	.0000000	.0000000	.0000000
29	7	.1590909	.2000000	.0208333
30	7	.1590909	.1186441	.0208333
31	2	.0454545	.2500000	.0059524
32	0	.0000000	.0000000	.0000000
33	7	.1590909	.1794872	.0208333
34	2	.0454545	.4000000	.0059524
35	7	.1590909	.1320754	.0208333
36	5	.1136363	.0609756	.0148810
37	3	.0681818	.1071428	.0089286
38	0	.0000000	.0000000	.0000000
39	1	.0227273	.2500000	.0029762
40	10	.2272727	.1785714	.0297619
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	0	.0000000	.0000000	.0000000

Table 39

Factors (N=43) Identified by All Respondents (N=367) to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY	PER CENT
1	48	.13079
2	2	.00545
3	44	.11989
4	65	.17711
5	24	.06540
6	2	.00545
7	183	.49864
8	0	.00000
9	0	.00000
10	108	.29428
11	125	.34060
12	3	.00817
13	53	.14441
14	4	.01090
15	39	.10627
16	4	.01090
17	22	.05995
18	24	.06540
19	8	.02180
20	91	.24796
21	3	.00817
22	0	.00000
23	18	.04905
24	17	.04632
25	28	.07629
26	28	.07629
27	1	.00272
28	12	.03270
29	1	.00272
30	1	.00272
31	13	.03542
32	19	.05177
33	0	.00000
34	63	.17166
35	2	.00545
36	3	.00817
37	0	.00000
38	60	.16349
39	72	.19619
40	3	.00817
41	38	.10354
42	31	.08447
43	25	.06812

Table 40

Factors (N=43) Identified by Public Respondents (N=336) to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF SUBSAMPLE	PER CENT OF SUBSAMPLE	PER CENT OF TOTAL F	PER CENT OF TOTAL N
1	46	•1369047	•9583333	•1253406
2	2	•0059524	1•0000000	•0054496
3	41	•1220238	•9318181	•1117166
4	53	•1577381	•8153846	•1444141
5	23	•0684524	•9583333	•0626703
6	2	•0059524	1•0000000	•0054496
7	167	•4970238	•9125683	•4550408
8	0	•0000000	•0000000	•0000000
9	0	•0000000	•0000000	•0000000
10	100	•2976190	•9259259	•2724795
11	118	•3511904	•9439999	•3215259
12	3	•0089286	1•0000000	•0081744
13	49	•1458333	•9245283	•1335149
14	4	•0119048	1•0000000	•0108992
15	35	•1041666	•8974358	•0953678
16	4	•0119048	1•0000000	•0108992
17	20	•0595238	•9090909	•0544959
18	23	•0684524	•9583333	•0626703
19	7	•0208333	•8750000	•0190736
20	88	•2619047	•9670329	•2397820
21	3	•0089286	1•0000000	•0081744
22	0	•0000000	•0000000	•0000000
23	17	•0505952	•9444444	•0463215
24	15	•0446429	•8823529	•0408719
25	25	•0744047	•8928571	•0681199
26	25	•0744047	•8928571	•0681199
27	1	•0029762	1•0000000	•0027248
28	11	•0327381	•9166666	•0299728
29	1	•0029762	1•0000000	•0027248
30	0	•0000000	•0000000	•0000000
31	13	•0386905	1•0000000	•0354223
32	17	•0505952	•8947368	•0463215
33	0	•0000000	•0000000	•0000000
34	55	•1636904	•8730158	•1498637
35	2	•0059524	1•0000000	•0054496
36	2	•0059524	•6666666	•0054496
37	0	•0000000	•0000000	•0000000
38	53	•1577381	•8833333	•1444141
39	67	•1994047	•9305555	•1825613
40	2	•0059524	•6666666	•0054496
41	37	•1101190	•9736842	•1008174
42	29	•0863095	•9354838	•0790191
43	20	•0595238	•8000000	•0544959

Table 41

Factors (N=43) Identified by Private Respondents (N=17) to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF SUBSAMPLE	PER CENT OF SUBSAMPLE	PER CENT OF TOTAL F	PER CENT OF TOTAL N
1	1	.0588235	.0208333	.0027248
2	0	.0000000	.0000000	.0000000
3	2	.1176471	.0454545	.0054496
4	7	.4117647	.1076923	.0190736
5	0	.0000000	.0000000	.0000000
6	0	.0000000	.0000000	.0000000
7	13	.7647059	.0710382	.0354223
8	0	.0000000	.0000000	.0000000
9	0	.0000000	.0000000	.0000000
10	5	.2941176	.0462963	.0136240
11	5	.2941176	.0400000	.0136240
12	0	.0000000	.0000000	.0000000
13	3	.1764706	.0566038	.0081744
14	0	.0000000	.0000000	.0000000
15	3	.1764706	.0769231	.0081744
16	0	.0000000	.0000000	.0000000
17	0	.0000000	.0000000	.0000000
18	1	.0588235	.0416667	.0027248
19	1	.0588235	.1250000	.0027248
20	2	.1176471	.0219780	.0054496
21	0	.0000000	.0000000	.0000000
22	0	.0000000	.0000000	.0000000
23	0	.0000000	.0000000	.0000000
24	2	.1176471	.1176471	.0054496
25	1	.0588235	.0357143	.0027248
26	0	.0000000	.0000000	.0000000
27	0	.0000000	.0000000	.0000000
28	0	.0000000	.0000000	.0000000
29	0	.0000000	.0000000	.0000000
30	0	.0000000	.0000000	.0000000
31	0	.0000000	.0000000	.0000000
32	0	.0000000	.0000000	.0000000
33	0	.0000000	.0000000	.0000000
34	6	.3529412	.0952381	.0163488
35	0	.0000000	.0000000	.0000000
36	0	.0000000	.0000000	.0000000
37	0	.0000000	.0000000	.0000000
38	3	.1764706	.0500000	.0081744
39	2	.1176471	.0277778	.0054496
40	0	.0000000	.0000000	.0000000
41	0	.0000000	.0000000	.0000000
42	0	.0000000	.0000000	.0000000
43	4	.2352941	.1600000	.0108992

Table 42

Factors (N=43) Identified by Public Secondary Personnel (N=163) Respondents to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	21	.1288343	.4565217	.0625000
2	2	.0122699	1.0000000	.0059524
3	27	.1656442	.6585366	.0803571
4	24	.1472392	.4528301	.0714285
5	18	.1104294	.7826087	.0535714
6	0	.0000000	.0000000	.0000000
7	84	.5153374	.5029940	.2500000
8	0	.0000000	.0000000	.0000000
9	0	.0000000	.0000000	.0000000
10	45	.2760736	.4500000	.1339285
11	45	.2760736	.3813559	.1339285
12	3	.0184049	1.0000000	.0089286
13	27	.1656442	.5510204	.0803571
14	0	.0000000	.0000000	.0000000
15	11	.0674846	.3142857	.0327381
16	0	.0000000	.0000000	.0000000
17	11	.0674846	.5500000	.0327381
18	10	.0613497	.4347826	.0297619
19	3	.0184049	.4285714	.0089286
20	29	.1779141	.3295454	.0863095
21	1	.0061350	.3333333	.0029762
22	0	.0000000	.0000000	.0000000
23	11	.0674846	.6470588	.0327381
24	6	.0368098	.4000000	.0178571
25	8	.0490798	.3200000	.0238095
26	13	.0797546	.5200000	.0386905
27	0	.0000000	.0000000	.0000000
28	6	.0368098	.5454545	.0178571
29	0	.0000000	.0000000	.0000000
30	0	.0000000	.0000000	.0000000
31	9	.0552147	.6923077	.0267857
32	8	.0490798	.4705882	.0238095
33	0	.0000000	.0000000	.0000000
34	28	.1717791	.5090909	.0833333
35	0	.0000000	.0000000	.0000000
36	0	.0000000	.0000000	.0000000
37	0	.0000000	.0000000	.0000000
38	38	.2331288	.7169811	.1130952
39	34	.2085890	.5074627	.1011904
40	1	.0061350	.5000000	.0029762
41	15	.0920245	.4054054	.0446429
42	15	.0920245	.5172414	.0446429
43	10	.0613497	.5000000	.0297619

Table 43

Factors (N=43) Identified by Public Postsecondary Personnel (N=173) Responding to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	25	.1445087	.5434783	.0744047
2	0	.0000000	.0000000	.0000000
3	14	.0809249	.3414634	.0416667
4	29	.1676300	.5471698	.0863095
5	5	.0289017	.2173913	.0148810
6	2	.0115607	1.0000000	.0059524
7	83	.4797688	.4970059	.2470238
8	0	.0000000	.0000000	.0000000
9	0	.0000000	.0000000	.0000000
10	55	.3179190	.5500000	.1636904
11	73	.4219653	.6186441	.2172619
12	0	.0000000	.0000000	.0000000
13	22	.1271676	.4489796	.0654762
14	4	.0231214	1.0000000	.0119048
15	24	.1387283	.6857142	.0714285
16	4	.0231214	1.0000000	.0119048
17	9	.0520231	.4500000	.0267857
18	13	.0751445	.5652174	.0386905
19	4	.0231214	.5714285	.0119048
20	59	.3410404	.6704545	.1755952
21	2	.0115607	.6666666	.0059524
22	0	.0000000	.0000000	.0000000
23	6	.0346821	.3529412	.0178571
24	9	.0520231	.6000000	.0267857
25	17	.0982659	.6799999	.0505952
26	12	.0693641	.4800000	.0357143
27	1	.0057803	1.0000000	.0029762
28	5	.0289017	.4545454	.0148810
29	1	.0057803	1.0000000	.0029762
30	0	.0000000	.0000000	.0000000
31	4	.0231214	.3076923	.0119048
32	9	.0520231	.5294117	.0267857
33	0	.0000000	.0000000	.0000000
34	27	.1560693	.4909090	.0803571
35	2	.0115607	1.0000000	.0059524
36	2	.0115607	1.0000000	.0059524
37	0	.0000000	.0000000	.0000000
38	15	.0867051	.2830188	.0446429
39	33	.1907514	.4925373	.0982143
40	1	.0057803	.5000000	.0029762
41	22	.1271676	.5945945	.0654762
42	14	.0809249	.4827586	.0416667
43	10	.0578035	.5000000	.0297619

Table 44

Factors (N=43) Identified by Public Administrators (N=65) Responding to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	10	.1538461	.2173913	.0297619
2	0	.0000000	.0000000	.0000000
3	8	.1230769	.1951219	.0238095
4	14	.2153846	.2641509	.0416667
5	5	.0769231	.2173913	.0148810
6	1	.0153846	.5000000	.0029762
7	28	.4307692	.1676646	.0833333
8	0	.0000000	.0000000	.0000000
9	0	.0000000	.0000000	.0000000
10	17	.2615384	.1700000	.0505952
11	24	.3692307	.2033898	.0714285
12	0	.0000000	.0000000	.0000000
13	9	.1384615	.1836734	.0267857
14	0	.0000000	.0000000	.0000000
15	11	.1692308	.3142857	.0327381
16	0	.0000000	.0000000	.0000000
17	3	.0461538	.1500000	.0089286
18	5	.0769231	.2173913	.0148810
19	0	.0000000	.0000000	.0000000
20	21	.3230769	.2386363	.0625000
21	0	.0000000	.0000000	.0000000
22	0	.0000000	.0000000	.0000000
23	3	.0461538	.1764706	.0089286
24	4	.0615385	.2666667	.0119048
25	8	.1230769	.3200000	.0238095
26	6	.0923077	.2399999	.0178571
27	0	.0000000	.0000000	.0000000
28	2	.0307692	.1818181	.0059524
29	0	.0000000	.0000000	.0000000
30	0	.0000000	.0000000	.0000000
31	3	.0461538	.2307692	.0089286
32	6	.0923077	.3529412	.0178571
33	0	.0000000	.0000000	.0000000
34	17	.2615384	.3090909	.0505952
35	0	.0000000	.0000000	.0000000
36	0	.0000000	.0000000	.0000000
37	0	.0000000	.0000000	.0000000
38	8	.1230769	.1509433	.0238095
39	10	.1538461	.1492537	.0297619
40	0	.0000000	.0000000	.0000000
41	8	.1230769	.2162162	.0238095
42	6	.0923077	.2068965	.0178571
43	1	.0153846	.0500000	.0029762

Table 45

Factors (N=43) Identified by Public Instructors (N=214) Responding to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	26	.1214953	.5652174	.0773809
2	2	.0093458	1.0000000	.0059524
3	30	.1401869	.7317073	.0892857
4	34	.1588784	.6415094	.1011904
5	12	.0560748	.5217391	.0357143
6	0	.0000000	.0000000	.0000000
7	115	.5373831	.6886227	.3422619
8	0	.0000000	.0000000	.0000000
9	0	.0000000	.0000000	.0000000
10	53	.2476635	.5300000	.1577381
11	79	.3691589	.6694915	.2351190
12	2	.0093458	.6666666	.0059524
13	36	.1682242	.7346938	.1071428
14	3	.0140187	.7500000	.0089286
15	17	.0794392	.4857143	.0505952
16	4	.0186916	1.0000000	.0119048
17	15	.0700935	.7500000	.0446429
18	16	.0747663	.6956521	.0476190
19	4	.0186916	.5714285	.0119048
20	56	.2616822	.6363636	.1666666
21	3	.0140187	1.0000000	.0089286
22	0	.0000000	.0000000	.0000000
23	13	.0607477	.7647058	.0386905
24	9	.0420561	.6000000	.0267857
25	12	.0560748	.4800000	.0357143
26	15	.0700935	.6000000	.0446429
27	0	.0000000	.0000000	.0000000
28	8	.0373832	.7272727	.0238095
29	1	.0046729	1.0000000	.0029762
30	0	.0000000	.0000000	.0000000
31	9	.0420561	.6923077	.0267857
32	10	.0467290	.5882353	.0297619
33	0	.0000000	.0000000	.0000000
34	32	.1495327	.5818182	.0952381
35	1	.0046729	.5000000	.0029762
36	2	.0093458	1.0000000	.0059524
37	0	.0000000	.0000000	.0000000
38	32	.1495327	.6037735	.0952381
39	43	.2009345	.6417910	.1279762
40	1	.0046729	.5000000	.0029762
41	24	.1121495	.6486486	.0714285
42	21	.0981308	.7241379	.0625000
43	15	.0700935	.7500000	.0446429

Table 46

Factors (N=43) Identified by Public Counselors (N=44) Responding to the General Survey that Aid the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	6	.1363636	.1304348	.0178571
2	0	.0000000	.0000000	.0000000
3	2	.0454545	.0487805	.0059524
4	6	.1363636	.1132075	.0178571
5	5	.1136363	.2173913	.0148810
6	0	.0000000	.0000000	.0000000
7	25	.5681818	.1497006	.0744047
8	0	.0000000	.0000000	.0000000
9	0	.0000000	.0000000	.0000000
10	28	.6363636	.2800000	.0833333
11	12	.2727273	.1016949	.0357143
12	1	.0227273	.3333333	.0029762
13	3	.0681818	.0612245	.0089286
14	1	.0227273	.2500000	.0029762
15	6	.1363636	.1714286	.0178571
16	0	.0000000	.0000000	.0000000
17	2	.0454545	.1000000	.0059524
18	1	.0227273	.0434783	.0029762
19	2	.0454545	.2857143	.0059524
20	10	.2272727	.1136363	.0297619
21	0	.0000000	.0000000	.0000000
22	0	.0000000	.0000000	.0000000
23	1	.0227273	.0588235	.0029762
24	2	.0454545	.1333333	.0059524
25	4	.0909091	.1600000	.0119048
26	2	.0454545	.0800000	.0059524
27	0	.0000000	.0000000	.0000000
28	0	.0000000	.0000000	.0000000
29	0	.0000000	.0000000	.0000000
30	0	.0000000	.0000000	.0000000
31	1	.0227273	.0769231	.0029762
32	0	.0000000	.0000000	.0000000
33	0	.0000000	.0000000	.0000000
34	3	.0681818	.0545455	.0089286
35	1	.0227273	.5000000	.0029762
36	0	.0000000	.0000000	.0000000
37	0	.0000000	.0000000	.0000000
38	9	.2045454	.1698113	.0267857
39	11	.2500000	.1641791	.0327381
40	0	.0000000	.0000000	.0000000
41	5	.1136363	.1351351	.0148810
42	1	.0227273	.0344828	.0029762
43	3	.0681818	.1500000	.0089286

Table 47

Suggestions (N=23) Identified by All Respondents (N=367) to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY	PER CENT
1	127	.34605
2	56	.15259
3	104	.28338
4	178	.48501
5	80	.21798
6	121	.32970
7	61	.16621
8	96	.26158
9	49	.13351
10	13	.03542
11	109	.29700
12	17	.04632
13	150	.40872
14	55	.14986
15	102	.27792
16	57	.15531
17	59	.16076
18	46	.12534
19	12	.03270
20	33	.08992
21	56	.15259
22	87	.23706
23	63	.17166

Table 48

Suggestions (N=23) Identified by Public Respondents (N=336) to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF SUBSAMPLE	PER CENT OF SUBSAMPLE	PER CENT OF TOTAL F	PER CENT OF TOTAL N
1	120	.3571428	.9448819	.3269755
2	52	.1547619	.9285714	.1416894
3	94	.2797619	.9038461	.2561308
4	164	.4880952	.9213483	.4468665
5	75	.2232143	.9375000	.2043597
6	113	.3363095	.9338843	.3079019
7	57	.1696428	.9344262	.1553133
8	86	.2559524	.8958333	.2343324
9	46	.1369047	.9387755	.1253406
10	13	.0386905	1.0000000	.0354223
11	99	.2946428	.9082569	.2697548
12	16	.0476190	.9411764	.0435967
13	133	.3958333	.8866667	.3623978
14	51	.1517857	.9272727	.1389645
15	94	.2797619	.9215686	.2561308
16	53	.1577381	.9298245	.1444141
17	56	.1666666	.9491525	.1525885
18	42	.1250000	.9130434	.1144414
19	12	.0357142	1.0000000	.0326975
20	29	.0863095	.8787879	.0790191
21	52	.1547619	.9285714	.1416894
22	84	.2500000	.9655172	.2288828
23	56	.1666666	.8888888	.1525885

Table 49

Suggestions (N=23) Identified by Private Respondents (N=17) to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF SUBSAMPLE	PER CENT OF SUBSAMPLE	PER CENT OF TOTAL F	PER CENT OF TOTAL N
1	3	.1764706	.0236220	.0081744
2	1	.0588235	.0178571	.0027248
3	4	.2352941	.0384615	.0108992
4	8	.4705882	.0449438	.0217984
5	4	.2352941	.0500000	.0108992
6	6	.3529412	.0495868	.0163488
7	4	.2352941	.0655738	.0108992
8	5	.2941176	.0520833	.0136240
9	1	.0588235	.0204082	.0027248
10	0	.0000000	.0000000	.0000000
11	4	.2352941	.0366972	.0108992
12	1	.0588235	.0588235	.0027248
13	8	.4705882	.0533333	.0217984
14	2	.1176471	.0363636	.0054496
15	5	.2941176	.0490196	.0136240
16	2	.1176471	.0350877	.0054496
17	1	.0588235	.0169492	.0027248
18	2	.1176471	.0434783	.0054496
19	0	.0000000	.0000000	.0000000
20	3	.1764706	.0909091	.0081744
21	3	.1764706	.0535714	.0081744
22	1	.0588235	.0114943	.0027248
23	6	.3529412	.0952381	.0163488

Table 50

Suggestions (N=23) Identified by Public Secondary Personnel (N=163) Responding to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	61	.3742331	.5083333	.1815476
2	32	.1963190	.6153846	.0952381
3	40	.2453988	.4255319	.1190476
4	80	.4907975	.4878048	.2380952
5	18	.1104294	.2399999	.0535714
6	62	.3803681	.5486726	.1845238
7	23	.1411043	.4035087	.0684524
8	35	.2147239	.4069767	.1041666
9	27	.1656442	.5369565	.0803571
10	4	.0245399	.3076923	.0119048
11	62	.3803681	.6262626	.1845238
12	7	.0429448	.4375000	.0208333
13	73	.4478527	.5488722	.2172619
14	22	.1349693	.4313725	.0654762
15	48	.2944785	.5106383	.1428571
16	23	.1411043	.4339622	.0684524
17	28	.1717791	.5000000	.0833333
18	21	.1288343	.5000000	.0625000
19	7	.0429448	.5833333	.0208333
20	12	.0736196	.4137931	.0357143
21	28	.1717791	.5384615	.0833333
22	39	.2392638	.4642857	.1160714
23	25	.1533742	.4464285	.0744047

Table 51

Suggestions (N=23) Identified by Public Postsecondary Personnel (N=173) Responding to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	59	.3410404	.4916666	.1755952
2	20	.1156069	.3846154	.0595238
3	54	.3121387	.5744681	.1607143
4	84	.4855491	.5121951	.2500000
5	57	.3294798	.7600000	.1696428
6	51	.2947977	.4513274	.1517857
7	34	.1965318	.5964912	.1011904
8	51	.2947977	.5930232	.1517857
9	19	.1098266	.4130434	.0565476
10	9	.0520231	.6923077	.0267857
11	37	.2138728	.3737373	.1101190
12	9	.0520231	.5625000	.0267857
13	60	.3468208	.4511278	.1785714
14	29	.1676300	.5686274	.0863095
15	46	.2658959	.4893616	.1369047
16	30	.1734104	.5660377	.0892857
17	28	.1618497	.5000000	.0833333
18	21	.1213872	.5000000	.0625000
19	5	.0289017	.4166666	.0148810
20	17	.0982659	.5862069	.0505952
21	24	.1387283	.4615384	.0714285
22	45	.2601156	.5357143	.1339285
23	31	.1791907	.5535714	.0922619

Table 52

Suggestions (N=23) Identified by Public Administrators (N=65) Responding to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	23	.3538461	.1916667	.0684524
2	15	.2307692	.2884615	.0446429
3	25	.3846154	.2659574	.0744047
4	25	.3846154	.1524390	.0744047
5	20	.3076923	.2666667	.0595238
6	20	.3076923	.1769911	.0595238
7	9	.1384615	.1578947	.0267857
8	22	.3384615	.2558139	.0654762
9	6	.0923077	.1304348	.0178571
10	3	.0461538	.2307692	.0089286
11	12	.1846154	.1212121	.0357143
12	3	.0461538	.1875000	.0089286
13	29	.4461538	.2180451	.0863095
14	10	.1538461	.1960784	.0297619
15	17	.2615384	.1808510	.0505952
16	9	.1384615	.1698113	.0267857
17	11	.1692308	.1964285	.0327381
18	7	.1076923	.1666666	.0208333
19	4	.0615385	.3333333	.0119048
20	4	.0615385	.1379310	.0119048
21	16	.2461538	.3076923	.0476190
22	20	.3076923	.2380952	.0595238
23	7	.1076923	.1250000	.0208333

Table 53

Suggestions (N=23) Identified by Public Instructors (N=214) Responding to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	73	.3411215	.6083333	.2172619
2	32	.1495327	.6153846	.0952381
3	54	.2523364	.5744681	.1607143
4	110	.5140187	.6707317	.3273809
5	46	.2149532	.6133333	.1369047
6	72	.3364486	.6371681	.2142857
7	38	.1775700	.6666666	.1130952
8	50	.2336448	.5813953	.1488095
9	32	.1495327	.6956521	.0952381
10	8	.0373832	.6153846	.0238095
11	73	.3411215	.7373737	.2172619
12	10	.0467290	.6250000	.0297619
13	83	.3878505	.6240601	.2470238
14	32	.1495327	.6274509	.0952381
15	64	.2990654	.6808510	.1904762
16	35	.1635514	.6603773	.1041666
17	37	.1728972	.6607143	.1101190
18	26	.1214953	.6190476	.0773809
19	8	.0373832	.6666666	.0238095
20	16	.0747663	.5517241	.0476190
21	27	.1261682	.5192307	.0803571
22	53	.2476635	.6309524	.1577381
23	41	.1915888	.7321428	.1220238

Table 54

Suggestions (N=23) Identified by Public Counselors (N=44) Responding to the General Survey to Improve the Articulation Process, by Frequency and Percentage of Subsample and by Frequency and Percentage of Respondents

RESPONSE	FREQUENCY OF GROUP WITHIN SUBSAMPLE	PER CENT OF GROUP N	PER CENT OF SUBSAMPLE F	PER CENT OF SUBSAMPLE N
1	17	.3863636	.1416667	.0505952
2	5	.1136363	.0961538	.0148810
3	11	.2500000	.1170213	.0327381
4	24	.5454545	.1463414	.0714285
5	9	.2045454	.1199999	.0267857
6	17	.3863636	.1504424	.0505952
7	10	.2272727	.1754386	.0297619
8	14	.3181818	.1627907	.0416667
9	6	.1363636	.1304348	.0178571
10	1	.0227272	.0769231	.0029762
11	12	.2727273	.1212121	.0357143
12	2	.0454545	.1250000	.0059524
13	16	.3636363	.1203007	.0476190
14	6	.1363636	.1176471	.0178571
15	12	.2727273	.1276596	.0357143
16	6	.1363636	.1132075	.0178571
17	7	.1590909	.1250000	.0208333
18	7	.1590909	.1666666	.0208333
19	0	.0000000	.0000000	.0000000
20	8	.1818181	.2758620	.0238095
21	7	.1590909	.1346154	.0208333
22	8	.1818181	.0952381	.0238095
23	8	.1818181	.1428571	.0238095

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